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JAMES HADLEY,	"
EZRA ABBOT,	Cambridge.
ARNOLD GUYOT,	Princeton.

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ARTICLE I.

ON THE VIEWS OF BIOT AND WEBER RESPECTING THE RELATIONS OF THE HINDU AND CHINESE SYSTEMS OF ASTERISMS;

WITH AN ADDITION, ON MÜLLER'S VIEWS RESPECTING THE SAME SUBJECT.

BY WILLIAM D. WHITNEY,
PROFESSOR OF SANSKRIT IN YALE COLLEGE.

Presented to the Society October 16th, 1862.

IN the sixth volume of this Journal was published a translation, with an elaborate commentary and exposition, of the *Sūrya-Siddhānta*, one of the most ancient and authoritative text-books of the Hindu science of astronomy. The work soon after received a generally appreciative and gratifying notice, running through several numbers of the *Journal des Savants* (Paris, Aug.—Dec., 1860), at the hands of the eminent physicist and philosopher, Mons. J. B. BIOT, who, after his name had been identified for considerably more than half a century with the history of French science, has since (Feb. 3rd, 1862) died, at the great age of 87 years, active, laborious, and prolific to the very end, still claiming a place in the working ranks of the present generation, not less than in their grateful regard and admiration, as the last survivor of a band of giants in intellect whose achievements shed lustre over the first half of the nineteenth century. In the series of articles referred to, M. Biot takes up anew the discussion of the Chinese origin of the Hindu system of *nakshatras*, or lunar asterisms—a question first opened by him as long ago as 1840. This discussion it is the principal object of the present paper to continue, with reference also to the views recently set forth upon the same subject by Prof. A. W. LEIBNIZ of Berlin: but, before entering upon it, I must ask permission to reply briefly to the unfavorable judgments passed by M. Biot upon certain portions of the translation and commentary of the *Siddhānta*, in the course of his prevailingly com-

mandatory review. In craving this liberty I think myself justified by the consideration of the great weight of authority attaching to the publicly expressed opinions of one so universally known and honored: I am unwilling to allow our work to lie under his partial condemnation without some explanation and protest with regard to points in which I think he has misunderstood it, or judged it too harshly, and thus has done us unintentional injustice. Were he yet living, such explanation might be addressed to himself privately, leaving it to him to do us more public justice if he saw fit; but, as that is now impossible, we can only make our counter-plea before the public, and turn the case over for their final judgment.

The first matter which calls forth M. Biot's disapprobation, and upon which he lets fall a heavy burden of censure, returning to it once and again in the course of his articles, is the introductory note prefixed to our work, wherein the translator sets forth the manner in which he was led to undertake the translation and comment of the Hindu treatise, and the considerations which, in his view, rendered the execution of the task desirable, and even indispensable. He rehearses the works of those who had earlier treated of the Hindu astronomy, and points out that, notwithstanding their acknowledged value, they contained but a partial and fragmentary exhibition of the subject, while nothing had up to that time appeared which showed the Hindu science in its *ensemble*, displaying its garb as well as its substance, holding up its superstitions, its fanciful theories, its absurd hypotheses and assumptions, in the same light as its groundwork of observed fact and its mathematical form. If all this, the reviewer sees only an arrogant and reprehensible attempt to exalt the value of the work offered by depreciating its predecessors: it betrays, to his apprehension, a misunderstanding of the real value which a translation of the treatise could now have—a value purely philological and historical, and not at all bearing upon instruction and positive science. Now nothing could have been farther from the minds of the translator and those associated with him than this overestimate of their own labors and underestimate of those of others, which M. Biot reprehends so severely, and if the preface appears to breathe such a feeling, they must regret that it should be so unhappily expressed as seriously to misrepresent them. But they hope the generality of those who shall read the introductory note will find that M. Biot has misjudged its spirit; and they are even confident that his error will find its antidote in the translation which he himself, with entire good faith, offers of the passages to which he takes exception. It was not the duty of the translator to set forth in detail, and with lengthened eulogy, the merits of those who had gone before him, but only to present

the considerations which justified him in taking up the subject anew, and in this particular way, notwithstanding all that they had done. He would not think of disputing an item of the praise which M. Biot, in his defense of previous writers, feels called upon to award to their works; he would only ask that M. Biot should allow the truth of his counter-allegation, that those who wished to understand the Hindu astronomy in its entirety—and especially in its historical and philological aspects, as distinguished from its scientific—were in pressing need of such a guide to its comprehension as a complete translation and annotation of one of its principal treatises would furnish. If the commendations which M. Biot, with the utmost kindness and liberality, afterwards bestows upon the work itself are at all merited, he who undertook it cannot fairly be accused of overweening self-estimation for claiming that there was both room and call for such a work.

Our reviewer expresses his decided preference for such an arrangement of the matter composing the volume as should give the translation of the Siddhânta text in unbroken continuity leaving the exposition to follow after in a mass. I cannot think that this preference will be shared by many of those who shall have occasion to consult and use the book. Considering the want of continuous and orderly arrangement in the treatise—to which M. Biot himself calls attention, illustrating it at some length—and the obscure and elliptical character of the text, which is in great part quite unintelligible without the aid of a commentary, it is probable that ninety-nine persons out of a hundred would prefer to have each connected passage immediately followed by its own explanation, as is the case in our work. This is the method usually followed—and, so far as I know, with universal approval—in the publication of original Sanskrit texts with their commentaries: as for instance, in all the editions of the astronomical text-books, including that of the *Sûrya-Siddhânta* itself. The few persons who shall wish to entertain themselves by a continuous perusal of the pure Siddhânta text may well enough be called upon to take the slight additional trouble of sometimes turning over more than one leaf to find the next passage, for the sake of the many whose convenience will be consulted by the mixture of text and comment.

Notwithstanding M. Biot's objections, I cannot see that we took an unwarranted liberty in modifying in our translation the titles of some of the chapters. These titles are no integral parts of the treatise, and are found to vary somewhat in different manuscripts; and they are in a few cases so palpable misstatements of the contents of the chapters to which they are appended that a translator can hardly prevail upon himself to leave them unaltered. Thus, for instance, M. Biot, in his sketch

of the contents of the Siddhānta, following the guidance of the manuscript titles, informs us that the fourth chapter treats of lunar eclipses; and the fifth of solar: which is entirely erroneous, since the fourth chapter has as much to do with solar as with lunar eclipses, nearly all its rules being essential to the calculation no less of the former than of the latter; while the fifth chapter deals merely with the element of parallax, as entering into the calculation of a solar eclipse. We have not failed to give the manuscript title of every chapter, in text and translation, and, if we modified it, to explain the reason of the modification; and this ought to relieve us from reproach, unless our modifications were for the worse, and not for the better.

In objecting to the Sanskrit index appended to our work, on the ground that it is imperfect, not making reference to every case of the occurrence in the treatise of each word indexed, M. Biot palpably confounds the duty of a translator with that of an editor. We did not publish any text of the Siddhānta, and no obligation could rest upon us to furnish an index to the text: our Index was rather an index to the notes; although in these we had, in fact, been careful to mention, and to explain, so far as we were able, every technical term which the treatise contained, besides many others, found in the native commentary upon it, or in other kindred works. To refer under each word even to all the verses of the translation where it happened to be cited in parenthesis, alongside of the English word or phrase chosen to represent it, would have been of no avail, since it was likely to have occurred in the text in twice as many other passages, in the translation of which it did not appear. M. Biot complains that under *liptā*, for example, he is referred to chapter i., verse 28, note, where the word is not used in the text, while he finds various verses to contain it to which no reference is made. But the note referred to does contain the statement that *liptā* is the precise synonym of *kalā*, 'a minute of arc,' and that, while the two are employed interchangeably in the text, the former occurs much more frequently than the latter. If the authority of the translators cannot be accepted upon a point like this, if they must give a complete set of references to the original text in order to enable the mathematical reader to judge whether, after all, *liptā* and *kalā* do not mean two different things, then their work is not fit to be studied, and had better be laid aside altogether. They have furnished an index by the aid of which one who has a certain degree of confidence in their ability to execute properly the task they undertook may make use of their translation and notes: any other belongs to him to provide who shall study the original text, and by it shall set himself to test and correct their work. Nor does M. Biot's distrust stop short of this last step; he essays in a single point, by way of example, to

convict their translation of inaccuracy, and to correct it. We are mistaken, he says, in rendering the word *bha* sometimes by 'asterism,' as if it were the synonym of *nakshatra*; since it really means only 'a fixed star in general.' Now if we had presumed to criticize one of M. Biot's formulas, pronouncing it mathematically unsound, he would doubtless have thought that we were overstepping our proper limits, and, by dealing with matters which he understood better than we, exposing our criticisms to discomfiture and ridicule. But he, in his turn, when laying to our charge a gross mistranslation, himself knowing not a word of Sanskrit, should have been very careful to see that his accusation was justly founded. In point of fact, it is entirely baseless: for *bha*, which originally, like *nakshatra*, meant simply 'star, shining heavenly body,' is in the Siddhânta employed both in this its general etymological sense, and with the specially restricted meaning of '*nakshatra*, lunar asterism.' It even much more often receives this latter meaning than *nakshatra* itself (which is comparatively a rare word, occurring but six times in the Siddhânta); a conspicuous and unequivocal instance might have been found by M. Biot at viii. 1, in the very introduction to the chapter on the *nakshatras*. Moreover, it is not infrequently applied to designate the signs of the zodiac, or the arcs of thirty degrees into which the ecliptic is divided; and only the connection, or the requirements of the case, can determine which of its three different senses it bears, and which must be substituted for it in making the translation of any given passage.

It is, of course, a legitimate matter for difference of opinion how far, in translating a work of science from a language with which scientific men are entirely unfamiliar, its technical terms should be translated. Respecting such of them as have technical correspondents in the language of the version, there would be, indeed, little or no question: others would be more doubtful. But we had so strong a sense of the inconvenience and perplexity arising from the frequent introduction, into a text intended for other than philological readers, of terms which are without known meaning, and, even if laboriously learned and made somewhat familiar, yet possess no power to suggest to the mind their significance, and require always an effort of the memory to recall the thing they designate, that we laid down for our guidance the principle that every term in the Siddhânta for which a tolerably accurate and not too tedious English equivalent could be found, should be uniformly rendered by that equivalent. At the same time, for the benefit of those scholars who were familiar with and preferred the Sanskrit terms, we scattered them with great liberality through our version, putting them in parenthesis after the words chosen to represent

them. M. Biot's objections to one or two special cases of the application of this method have not convinced me that the method was not, on the whole, the most eligible one, and worthy to be consistently adhered to. Two difficulties are thus avoided. In the first place, the Hindu technical language offers a number of synonyms for almost every scientific term, and among these it would have been necessary to make a somewhat arbitrary selection. If M. Biot has objected to our rendering *bha* and *nakshatra* by 'asterism,' which is as nearly as possible the primitive meaning of both, in virtue of which they are capable of being used to designate the same object, what would he have said to our rendering *bha* directly by '*nakshatra*'? In the second place, the misinterpretation and misuse of a term may sometimes be checked by a translation, rather than a bodily transfer, of it. It is easier to preserve from distortion in the mind a thing represented by a word which is directly intelligible, than one for which a dead algebraic sign is used. An illustration is furnished by this very term *nakshatra*, in connection with which M. Biot especially criticizes our method. If he had been constantly mindful that the proper meaning of the word was 'asterism,' and that whatever other significance it had came through that meaning, he might perhaps have been in part saved the misapprehensions of the Hindu system of *nakshatras* or asterisms which, as the case stands, he has not been able to avoid.

I would farther briefly point out—although the matter is perhaps of too small consequence to merit notice—that M. Biot's argument in favor of the possibility that the Hindus learned their astronomy from the Greeks later than the time of Ptolemy, and were not ignorant of his labors and their results, is called out only by a mistranslation of the language which we had used in reference to the subject. We had said, that "the absence from the Hindu system of the improvements introduced by Ptolemy into that of the Greeks tends strongly to prove that the transmission of the principal groundwork of the former took place before his time;" and M. Biot renders our phrase "tends strongly to prove" by 'seems manifestly to prove' (*semble prouver manifestement*), and 'offers the certain proof' (*offre la preuve certaine*). One more familiar with the English idiom would have seen that the language used did not assert a certain proof, but distinctly implied the contrary: it was equivalent to saying that this was a marked indication, or a *prima facie* argument, in favor of the fact as stated, while nevertheless it could not be regarded as establishing the truth of the latter; its force being weakened by various opposing considerations, such as those which M. Biot adduces against it, and whose bearing and pertinency we had ourselves not failed to perceive and take into account.

But that part of M. Biot's review of our work which has caused me the most surprise and disappointment, and against which I can least refrain from raising a protest, as altogether unjust and injurious, is the following paragraph, which I translate entire:

"I should be glad if I could close here the scientific examination of their work. But, to my great regret, I find myself completely at issue with them upon a point more controverted, and involved in greater obscurity, than almost any other; namely, this: wherein the twenty-eight *nakshatras* described in chapter viii. of the *Sûrya-Siddhânta* precisely consist, what astronomical use they are capable of filling, and whether they are originally native in India or introduced from abroad. I was led, twenty years since, to recognize, and to demonstrate by palpable proofs, that this singular institution, which enters into the general system of the Indian astronomy as a thing foreign to it, has its root and its explanation in the practical methods of the ancient Chinese astronomy, whence the Hindus derived it, altering its character, in order to employ it in astrological speculations. All the investigations which I have since been able to make into the subject have contributed to render this conclusion more manifestly true in my eyes: and, so late as last year, M. Stanislas Julien brought to light a very ancient Sanskrit-Chinese document which furnishes the most striking confirmation of it, containing a bilingual table, in which the twenty-eight Chinese *sieus* and the twenty-eight Hindu *nakshatras* are consecutively enumerated, by their own names, and set over against one another, precisely in the order of correspondence which I had attributed to them. Thus the results at which I had arrived in 1840 turn out to have been admitted and recognized, centuries ago, in China, as a matter of general opinion. But nothing of all this has touched those among the Indianists of our time who had formed for themselves in advance general theories respecting the nature and origin of the Hindu *nakshatras*. Learned as scholars, and subtle as philologists, they have yet been led astray by their want of positive knowledge. Being strangers to the methods of astronomical observation, not knowing how to discern for themselves what was physically possible or impossible to ancient observers, they have gratuitously attributed to the latter ideas which they have not had, and which even could not possibly come into their minds, since, for them, their utility would have been absolutely null, and their realization impracticable. They have not seen that the formation and astronomical application, at a very remote period, of the twenty eight *nakshatras* of unequal amplitude which the *Sûrya-Siddhânta* describes, imply a mode of observation by differences of right ascension, founded upon the mechanical measurement of intervals of time, whereof no trace is found among those nations of antiquity which had been the exclusive object of their studies. Then, when they have been informed that these conditions of origin were found actually realized, not far from India, in the ancient Chinese astronomy, of which they knew nothing, they have rejected this suggestion as a kind of insult to the occult science which they had dreamed out. I shall not reproduce here the demonstrative facts upon which I have established it. It would be useless to present them anew in the same form. But, addressing myself

once more to the Indianists who have rejected them without discussion, on account of their incompatibility with their own systems, I shall attempt to show them clearly wherein consist the illusions which they have formed for themselves upon the subject of our debate, illusions which could only lead them to embrace phantoms. This will be the object of a special article, after which I hope never again to have to return to this subject."

Here are several very serious and damaging charges made against the whole body of Indianists; ourselves being included, and even, as any one would naturally suppose, reckoned as the most heinous offenders of all, since it is in the course of a review of our work, and in the sequel of an asserted utter dissent from our opinion upon the point in controversy, that the indictment is brought forward. The Indianists have formed fanciful *à priori* theories respecting the origin and character of the Hindu system of asterisms. They have not known enough of astronomy to appreciate the force of the scientific arguments by which M. Biot has shown the untenability of those theories. Moreover, they have been too obstinately attached to their own previous notions, and too jealous of the honor of India in the matter, to be willing even to examine M. Biot's proofs: they have simply rejected them, and determined to continue to believe as they had believed, in spite of him and of astrology. If they are guilty of this mingled ignorance and wrong-headedness, they doubtless deserve to be visited with the reprehension of all scholars and scientific men—which M. Biot, certainly, has done his best to call down upon their heads. That they may not, however, in too just requital of their own unworthy conduct, be finally condemned without a hearing, I shall beg leave to offer on their behalf a defence, to which a review of the history of the controversy respecting the Hindu *nakshatras* will form an appropriate introduction.

The peculiar views of M. Biot respecting the Chinese origin of the Hindu system of *nakshatras*—that is to say, of asterisms, whether single stars or constellated groups, marking out a division of the ecliptic into twenty-seven or twenty-eight parts, commonly supposed to have been suggested by the moon's sidereal revolution in from twenty-seven to twenty-eight days, and to have been established mainly for the purpose of marking approximately her daily movement—were first brought forward by him in the course of a historical sketch of the Chinese astronomy, called forth by Ideler's work on Chinese chronology, and published in 1840 in the *Journal des Savants*, in the form of a series of articles.* In this sketch he claimed to prove that

* The articles are six in number; the first is given in the Number of the *Journal des Savants* for December, 1839, and the last in that for May, 1840. The title of the separate edition is *Recherches sur l'Ancienne Astronomie Chinoise, publiées à l'occasion d'un Mémoire de M. Ludwig Ideler sur la Chronologie des Chinois: il occupez ninety-eight quarto pages.*

the system in question was purely of Chinese growth, having been first established about 2350 B. C., and completed and perfected more than twelve centuries later, or not far from 1100 B. C.; that it had originally no relation whatever to the moon or the moon's revolution, being, rather, a series of single stars lying near the equator, and intended to be made use of as points of reference in observing the times and intervals of meridian transit of the various heavenly bodies, whether sun, moon, planets, or fixed stars; and that the Hindus, and other eastern nations, had imported the system from China, and had distorted it that it might be applied to uses which it was neither fitted nor intended to serve, seizing upon the chance coincidence of its number of divisions with the days of the moon's sidereal revolution to bring it into special relations with that planet. The grounds upon which this view is based need not be set forth here; they will in part come up later for statement and criticism: at present I pass on to notice the reception it met at the hands of the Indianists. By Lassen, in his *Indische Alterthumskunde*,* it was implicitly accepted, and made to contribute its part toward his determination of the chronological periods of Indian history. This prompt and trustful assent, however, of the chief authority of that period on Hindu archæology, entirely escaped the notice of M. Biot, who has only quite lately, in his very last discussion of the subject (1861), excepted Lassen on account of it from the condemnation he had pronounced upon the whole body of students of India. That the matter did not at this time receive wider notice and discussion is owing, as I conceive, not to the indifference and incredulity on the part of the Indianists to which M. Biot is inclined to attribute it, but to the fact that their attention was engaged by things of more pressing importance, and that the ground was not yet cleared and the way prepared for any thorough and penetrating investigation respecting it within the field of the Hindu literature. Prof. Weber of Berlin, however, in his *Lectures on the History of Indian Literature* (Berlin, 1852; p. 221), referred to M. Biot's researches, and took occasion to express his want of faith in their chief result, the Chinese origin of the Hindu system of asterisms, and his suspicion that the Chinese might rather have derived their own system from India; inclining, however, toward the conclusion that this mode of division of the heavens was first proposed in Chaldea, and thence spread in both directions, to India and to China. In a later lecture, on the *Inter-course between India and Western Countries*,† the same scholar

* Vol. I, Part 2 (1847), p. 742 etc.

† *Die Verbindungen Indiens mit den Ländern im Westen*; published in 1853 in the *Kieler Monatsschrift*, and later in *Weber's Indische Skizzen*, Berlin, 1857,

repeated in a still more peremptory manner his rejection of M. Biot's views, pronouncing them "unceremoniously to be rejected as impossible;" not founding his disbelief upon any observed and stated unsoundness in the arguments by which the French savant had defended his position, but upon certain general considerations, and upon the occurrence once or twice in the Hebrew Scriptures of a word which seemed to him to render it probable that the system was known to the Jews in the times of the Kings. This summary rejection, on the part of so eminent an authority, of conclusions so elaborately established, and so confidently entertained, and even warmly espoused, by M. Biot, appears to have touched the latter very keenly, and to have impressed upon his mind, so strongly that he was never afterward able to get rid of it, the conviction that he had no justice to expect from the Indianists. To him the grounds of Weber's incredulity seemed altogether trivial, and unworthy of being opposed to his own arguments, drawn from long-continued and painful researches in the scientific and literary history of China: his opinions, he thought, had been dismissed with a mere shrug of the shoulders, whiffed away as if unworthy of serious consideration and refutation. While it is impossible not to respect this injured feeling of the veteran astronomer and archaeologist, it is also not difficult to find excuses for the apparent brusqueness and want of consideration of the German scholar. His lack of faith in the other's results was, as his later papers show, founded upon a much more careful and thorough examination of them than his language indicated; but the necessarily compressed style of his essay rendered impossible any full statement of his reasons, and he only presented such a view as would be best appreciable by those for whom he was writing. His distrust of the critical treatment of the Chinese authorities relied upon by M. Biot was strong; the frightful failures of Bailly and Bentley to found a history of Hindu astronomy on a basis of mathematical calculation had rendered justly suspicious in his eyes that whole mode of investigation; and, having made up his adverse judgment, he expressed it with the freedom and directness which are his wont, and which, though sometimes, perhaps, wearing the aspect of dogmatism and over-confidence, really cover as much pure love of truth, freedom from prejudice, accessibility to the opinions and arguments of others, and candid openness to conviction, as are to be found in any scholar of the present day. To Prof. Weber's condemnation of his views, M. Biot put forth a reply in the *Journal des Savants* for 1859; he was furnished, in the form of a series of articles* on the *As-*

* These articles, six in number, are to be found in the *Journal des Savants* for April to September, 1859; in the separate impression, dated October 1859, they fill

tronomer of our late learned associate, Rev. H. R. Hoisington; as full an exposition of the Hindu astronomical system as could be drawn up from the materials accessible to him. The last article of the series is devoted to the subject of the *nakshatras*; the author restates in full, although concisely, the results at which he had arrived twenty years earlier, and the considerations upon which they had been founded, and endeavors, at the same time, to prove the objections alleged by Prof. Weber of no value or cogency.

It was at this time, in the summer of 1859, that my own investigations into the Hindu system were commenced, in connection with the *Sūrya-Siddhānta*. My attention was at once, of course, attracted to the views of M. Biot upon the subject, and they engaged my warm interest and my careful study. The form in which they were presented, as was the case with everything proceeding from their author's clear mind and eloquent pen, was very engaging, and the scientific basis upon which they claimed chiefly to rest had the appearance of being well and securely laid, while the adverse arguments by which they had been assailed seemed to me meagre, and of doubtful force. It was, indeed, *a priori*, a strange and hardly credible thing that India should have borrowed so important a portion of its ancient science from the far-off and almost inaccessible China, yet it was evidently not utterly impossible, and would admit of being proved by sound and sufficient evidence. If M. Biot, who had enjoyed greater advantages for studying the Chinese astronomy, and had devoted to it more attention, than any person living, had read its history correctly, the question of the origin of the system was fully solved, and it only remained for us to frame our views of the relations subsisting among ancient nations, and of the communication of knowledge from one to another, in a manner to square with this most important fact. My opinion to this effect was expressed before the Society at its meeting in New York, three years ago, and the substance of it

ninety-six pages. They are also reprinted, along with two other later series of articles by the same author—that on the *Sūrya-Siddhānta* and that on the History of Chinese Astronomy, to be noticed later—in a separate volume, entitled *Etudes sur l'Astronomie Indienne et sur l'Astronomie Chinoise*, par J. B. Biot etc. (Paris, 1862. 8vo). This volume, which was not issued from the press until after the author's death, has, with great impropriety, been extensively advertised as a posthumous work; while in fact, with the exception of an interesting but unfinished introduction, upon the scientific value of the Egyptian astronomy, it is entirely made up of *verbatim* reprints from the *Journal des Savants*—a fact which the editor, on his title page, in his introductory note, and everywhere else, has suppressed, or, at least, carefully ignored.

An article of sixteen pages, on Albiruni's account of the *nakshatras*, published in the *Journal des Savants* for January 1845, should also be mentioned here. It is not included in the reprint.

printed in the account of the proceedings at that meeting.* Maturer consideration of M. Biot's views and arguments, however, and especially a deeper study and better comprehension of the internal relations of the Hindu system itself, somewhat shook my confidence. I saw clearly that one whole department of the evidence on which he rested his case would have to be ruled out as irrelevant. He had alleged that the Hindu system was in part proved to be of Chinese origin by the fact that the Chinese employed it for what was palpably its true and original purpose, while the Hindus misapplied it to uses for which it was as ill-fitted as an auger for cutting a stick of wood in two, or a saw for boring a hole. This argument, it was plain to me, rested upon a fundamental misconception of the character of the Hindu asterisms, to which M. Biot had unwittingly transferred a part of the attributes of the Chinese *sieu*: the former were, in fact, at the least as well adapted to the uses made of

* As these Proceedings, although extensively distributed at the time among the members and correspondents of the Society, were never published in its Journal, I cite here the paragraphs relating to the subject:

"Prof. Whitney then farther adverted to the theory of M. Biot—developed in the Journal des Savants for 1849, and re-stated in that for August of this year—that the ancient Hindu division of the ecliptic into 27 or 28 *nakshatras* or lunar mansions, which is much older than the proper Hindu science of astronomy, came to India from China, and read, from a letter to himself of Prof. Weber of Berlin, the latter's objections to that theory, as follows:

"In still adhering to his theory of the Chinese origin of the Hindu *nakshatras*, M. Biot fails to note 1. The radical connection of the Hebrew *mazzaloth* and the Arabic *manzil*, which renders it highly probable that both denote the same thing; 2. The fact that the Hindu *nakshatras* are originally 27, and not 28; 3. The great indeterminateness which characterizes the most ancient lists of their names—especially, in the *Kāthaka*, the *Tāttiriya-Brāhmaṇa*, etc., the names are altogether diverse; 4. The great uncertainty which for that reason exists also with regard to the identity of the corresponding star groups; 5. The purely native origin of the 27 *nakshatras* in the *Bundelesh*, which, though of Semitic origin, should come Chinese influence here), yet have their own Persian appellations; 6. The influence of the Buddhists, which has transplanted to China that is Indian (as is further instanced by Julien's latest discovery of the fables in Chinese translations), while no transfer in the other direction is discoverable.

"I must confess that I am somewhat inclined to general scepticism as regards Chinese statements. I do not believe that we are to accept as genuine everything which the Chinese savants lay before us. With reference to the present they lie, so to speak, "like a book:" how much more, then, when the question is of hundreds, and even of thousands, of years ago. The epoch of historical criticism will yet dawn, for this department of antiquity also. As to the *nakshatras* themselves, I acknowledge that for me the subject is still involved in much obscurity. . . .

"While disclaiming to enter deeply at present into the discussion of this subject, or to speak with confidence respecting it, Prof. Whitney remarked that the considerations offered by Prof. Weber were only presumptive, and some of them of doubtful value: that they were the archaeological and philological arguments against the antecedent probability of M. Biot's theory, while they did not at all invalidate the force of the evidence presented in its favor, which seemed almost or quite conclusive, if unassailable by scientific argument. He also said he believed that thus far the general truth of the Chinese chronology and history had only been confirmed by the researches of modern critics."

them as were the latter. If M. Biot's theory, then, was to be accepted, it was solely upon the ground of his having proved the *sieu*, upon sufficient historical evidence, to be an institution of Chinese growth and development. To enter upon Chinese ground, and to reopen the investigation there, was what I had neither time, inclination, nor ability to do. In the notes, accordingly, to the eighth chapter of the *Sûrya-Siddhânta*, we set forth, as fully and plainly as was in our power, M. Biot's whole argument and conclusions, and gave in a qualified adhesion to the latter, putting our assent distinctly upon the ground of his researches into the history of the Chinese science, and pointing out wherein he had done injustice to the Hindus, and wherein his apprehension of their system needed correction: pointing out, further, considerations which appeared to us to indicate, almost too strongly for question, that the supposed communication between India and China could not have been direct, but must have taken place through the medium of some third people. Our general conclusion was expressed in the following words:

"We would suggest, then, as the theory best supported by all the facts thus far elicited, that a knowledge of the Chinese astronomy, and with it the Chinese system of division of the heavens into twenty-eight mansions, was carried into Western Asia at a period not much later than 1100 B. C., and was there adopted by some western people, either Semitic or Iranian. That in their hands it received a new form, such as adapted it to a ruder and less scientific method of observation, the limiting stars of the mansions being converted into zodiacal groups or constellations, and in some instances altered in position, so as to be brought nearer to the general planetary path of the ecliptic. That in this changed form, having become a means of roughly determining and describing the places and movements of the planets, it passed into the keeping of the Hindus—very probably along with the first knowledge of the planets themselves—and entered upon an independent career of history in India."

Later in our work, in order to do the utmost possible justice to M. Biot, by completely illustrating his views and the grounds on which they were based, I caused to be engraved and printed a comparative chart of the three systems, Chinese, Arabic, and Hindu, which I had prepared, in great measure for the purpose of drawing upon it the equator of B. C. 2347, regarded by him as having played an important part in directing the first selection of the Chinese determining stars.

That, after this elaborate statement, discussion, and illustration of his views on our part, and notwithstanding our partial assent to them, M. Biot could accuse us of having formed in advance a theory respecting the nature and origin of the Hindu *nakshatras* discordant with his own, and of having sacrificed to it

all his laborious researches and their results, without even taking the trouble to examine and endeavor to understand them, is a thing entirely incomprehensible to me, or comprehensible only on the supposition that his mind was so poisoned by the previous curt denial of his theory on the part of a single scholar as to be unable to distinguish between a partial acceptance and a total rejection, and that he was so persuaded of the infallibility of all his own arguments that he could conceive only of ignorance and carelessness as dissenting from them. But to require that we should put our minds under his despotic control, and dare to hold no opinions, even respecting matters of which we ought to be better qualified to judge than he, except such as he prescribed to us, even M. Biot, were he twice as eminent an archæologist and astronomer as he was, had no right. That he should be convinced by our arguments upon points respecting which we differed from him, and should modify his opinions accordingly, was what we, on our part, might wish and hope, but could hardly venture to anticipate, and certainly did not presume to demand; but we were, it seems to me, fully justified in expecting that he would not absolutely ignore our stated grounds of dissent, and even explicitly deny their existence, by accusing us of blindly and obstinately adhering to our preconceived views, in defiant neglect of the better light which he had tried to afford us. In fact, nothing can be plainer than that we, and not M. Biot, have a right to complain of a want of attention to the results of our labors. In a final article on the *nakshatras*, following next after the paragraph of which the translation was given above, he proceeds to set forth for the third time his views respecting their character and origin, in almost precisely the same manner, and upon precisely the same ground-work of evidence, as he had already done twice before. Throughout the whole discussion, although introduced into a professed notice of our work, he makes not the least account of or reference to the *nakshatras*, nor lets slip a tittle of evidence that he had ever examined them. Our objections to certain specific points in his reasoning get no answer, and the points are reiterated and urged anew as conclusive, as if their force had never been impugned. Colebrooke is loaded with commendation for having made honest use of the means at his command, and identified as well as he could the groups composing the *nakshatras*, not yielding to any temptation to misrepresent them, from a foreboding that his results might some time be used as evidences of the Chinese origin of the whole system: our own corrections of Colebrooke's identifications, which are in one or two points not without an important bearing, now favorable and now unfavorable, upon M. Biot's conclusions, are passed without notice. And M. Biot proceeds to draw out an exposition of the character and history of the

Hindu asterisms which is entirely at variance with our understanding of them, derived from the *Sûrya-Siddhânta* and other native documents, and set forth in the commentary on the *Siddhânta*; and he supports it with considerations which are in several instances directly opposed to the teachings of the *Siddhânta* itself, as interpreted by us. To this exposition I shall presently return: I pass on now to a brief account of the later contributions to the discussion of the same general subject.

Before the completion of M. Biot's series of articles on the *Sûrya-Siddhânta*, Prof. Weber had published the first part of a memoir in which he undertook to explain and defend the ground which he had taken earlier in opposition to the views of the distinguished French savant.* In this he attacked the very groundwork of evidence on which his adversary's history of the Chinese astronomy had been founded, attempting to show that the Chinese system of *sieu* was not traceable farther back than to two or three centuries before Christ, a period when, in his view, Hindu influence upon China would admit of being presumed; and arguing that, whatever might have been the origin of the *nakshatras* themselves, the *sieu* were derived directly from them. In answer to the open assault of Weber, and also to certain misgivings expressed in our notes to the *Sûrya-Siddhânta* respecting the documentary evidence sustaining Biot's history of the Chinese astronomy, the latter replied with a new exposition of that history; published, like his other works upon the same subject, in the *Journal des Savants*, as a series of articles.† Prof. Weber, finally, has closed up the controversy, since the lamented death of his opponent, by the publication of the second part of his memoir, in which he presents the results of an extended and thorough investigation of the position and value of the *nakshatras* in the whole ancient religious literature of the Hindus, laying for the first time a solid foundation for our knowledge of the value of this element in their science and their superstition.‡ As, however, I can no more agree with his opinions respecting the relation of the Hindu to the Chinese asterisms than with the opposing ones of M. Biot, and as I cannot admit the relevancy and force of all the arguments used by

* This memoir is to be found in the Transactions of the Berlin Academy for 1860, pp. 283-332. A separate edition of it is also published. Its title is *Die Vedischen Nachrichten von den Nakatra (Mondstationen)*. Von A. Weber. Erster Theil. Historische Einleitung.

† They are six in number, and run through the parts of the *Journal des Savants* for May to October, 1861. The separate edition occupies ninety pages, and has for its title *Précis de l'Histoire de l'Astronomie Chinoise*. The articles are also reprinted in the volume on the Hindu and Chinese astronomy to which reference has been made in a preceding note (p. 10).

‡ This second part of Weber's memoir occupies pages 267-400 of the Transactions of the Berlin Academy for 1861, and is also to be had separately.

either party, I shall go on to criticize the whole discussion, and to set forth my own persuasions and conjectures respecting the difficult and interesting point in ancient history to which it relates.

I commence with M. Biot. In his last, as in his former expositions of his views, this savant rests his belief of the Chinese origin of the Hindu *nakshatras* upon two grounds: first, the palpable and utter unsuitedness of the system to the use to which the Hindus applied it, and its as evident adaptedness to its Chinese employment; and second, the direct proof, documentary and scientific, that it is native in China; its appearance in India being of such a character and of such a date as readily to admit the hypothesis of its importation into the country from abroad. The former of these two foundations of his argument he sets forth in the concluding article of his series on the *Sūrya-Siddhānta*, and to it we will first direct our attention.

As has already been remarked, the pertinency and validity of this whole side of the argument of M. Biot was explicitly denied by us in the notes to the eighth chapter of the *Siddhānta*, and the attempt was there made to point out the misapprehensions from which he had derived it. Its repetition with the same confidence as before, in disregard of our objections, and without any endeavor to remove their force, renders necessary a more detailed discussion of the point than was formerly given.

It may have been, after all, not without some reference, although unacknowledged, to our counter-reasonings, that M. Biot has finally shifted his ground a little, and, no longer denying that there is a certain use of the *nakshatras* in which their application is not so entirely absurd, marks this as a modern modification, distinguishing it from the ancient form of the system, which remains open to all the imputations which he had formerly urged against it. He heads his article "*On the Ancient and Modern Nakshatras of the Hindus*," and commences it with the following statement:

"Since the first condition to be complied with in order to the proper treatment of a philosophical subject is its distinct limitation (*la circonscrire nettement*), I begin with declaring that I here employ the terms 'ancient' and 'modern' in a sense purely relative. I call 'ancient *nakshatras*' the twenty-eight of unequal amplitude which are described in the eighth chapter of the *Sūrya-Siddhānta*, and in the other classical treatises of Hindu astronomy derived from the same type, as being in use at their period, without any mention made of earlier *nakshatras*, which may have been differently constituted. I call 'modern,' on the other hand, the twenty-seven of equal amplitude which have been more recently substituted for the others, and which have since been, and are still at the present day, the only ones practically employed in India."

This distinction of "ancient" and "modern" *nakshatras* I hold to be entirely fictitious, having no foundation whatever in the facts of the Hindu science, but only in M. BIOT's misapprehension of those facts. He has taken the teachings of the astronomical text books, distorted a part of them, imagined others to complement them, and then made a division of them into two parts, setting down some as belonging to an ancient system, and others as belonging to a modern system, upon no other ground, that I can discover, than his own arbitrary choice; thus converting into two discordant institutions, of different date, what is in reality only one and the same thing. That he was not perfectly honest in all this, and did not put forth what he believed to be the true account of the *nakshatra* system, no one can for a moment suspect: but it is certain that his preoccupation of mind in favor of his own peculiar theory must have been very absorbing, or he could never have framed for its support so extraordinary a misrepresentation. Let us see for ourselves what aspect the asterisms wear in the *Sūrya-Siddhānta*, the native authority upon which M. Biot was solely dependent—he assuming, as he had sufficient reason to do, that its teachings agreed with those of the other treatises of the same class.

It should be remarked by way of preliminary that the *Siddhānta* gives no complete and connected exposition of the system of asterisms, stating the number, names, and order of its members, the number of stars composing them, and the like: they are assumed to be so familiarly known as to need no such attention. The usage of the treatise is the same with regard to a variety of matters of a kindred character, as the signs of the *zodiac*, the years of Jupiter's cycle, the months, the days of the week, etc., etc.: rules are laid down implying a vast deal of knowledge concerning all these which the *Siddhānta* itself does not take the trouble to give. The information respecting the asterisms which we do not find here must be supplied from sundry other sources, and its correspondence with the implications of the *Siddhānta* inferred from the occasional references which the latter makes.

The first passage, then, where anything is taught in the *Sūrya-Siddhānta* respecting the *nakshatras* is near the end of the second chapter, after the completion of the rules for calculating the true places of the planets. It is there (ii. 64) simply said that the portion (*bhoga*) of an asterism—i. e., the part of the ecliptic or planetary path belonging to each asterism—is eight hundred minutes of arc; and that, in order to find in what asterism any given planet is, the longitude of the latter, reduced to minutes, must be divided by eight hundred; this will determine the asterism, and the point in it, occupied by the planet; and hence, by means of the rate of daily motion of the planet, as found by

rules already laid down, may be learned the time it has spent, and the time it has yet to spend, in the asterism. This clearly implies a division of the ecliptic into twenty-seven equal portions ($800' \times 27 = 360^\circ$), each of which gets its name from one asterism, being the portion of the planetary path belonging to the latter; we had been taught before that the series begins from the end of the division Revatî; which point, again, we learn from the eighth chapter to be situated ten minutes (10') east of a certain star in the asterism Revatî, known by us as ζ Piscium. This is the only rule which the Siddhânta gives for ascertaining the presence of a planet in an asterism; if we desire to know when the moon is in Rohinî, or the sun and moon together in Âçleshâ, or Jupiter in Anurâdhâ, or anything of the kind, this is the method which we must follow. In a later part of the work, the seventh chapter, is taken up the subject of planetary conjunctions. Two planets, we see from the rules laid down, are said to be in conjunction (*yoga*: there are several other terms also of synonymous meaning) at the instant when they are upon the same secondary to the prime vertical, or upon the same great circle passing through the north and south points of the horizon. This is a peculiar mode of viewing the phenomenon of conjunction: we might rather have expected it to be regarded as taking place when the two bodies had the same longitude, or the same right ascension. Whether any other people has reckoned conjunction in a like manner, or whether any historical connection is inferrible from the peculiarity, I do not know. As data for the calculation of the conjunction are given the longitude and latitude of the two planets, and the process by which the moment of conjunction is determined is a very intricate, awkward, and inaccurate one, as is fully set forth in our notes to the chapter which teaches it. The object of the calculation appears to be purely astrological; the conjunction, as we are informed at the end of the chapter, receives its title and its significance from the degree of approach of the two heavenly bodies, from their relative position, and from their comparative brilliancy. In the eighth chapter, then, which is entitled in the MSS. "chapter of the conjunction of the asterisms and planets," the Siddhânta goes on to teach us how to determine the instant of a like momentary conjunction, on a secondary to the prime vertical, of any given planet with any one of the asterisms. The mode of making the calculation having been already sufficiently explained in the foregoing chapter, it was only necessary farther to give such a definition of the positions of the asterisms as should furnish the data requisite for performing the process. This is done in the manner which has been repeatedly described and illustrated, by M. Biot himself among the rest: the star is referred to the ecliptic by

an hour-circle, and its distance from the ecliptic upon that circle, and the distance of that circle from the initial point of the sphere, are noted and defined. The same data are in a later part of the treatise, the ninth chapter, prescribed to be employed in fixing the times of heliacal rising and setting of the asterisms: other than these, no uses of them are anywhere hinted at. But the asterisms are well known to be in most cases constellations or groups, and not single stars; how then does their position admit of being defined in the manner here described? This is a difficulty which it is probable that the Siddhânta itself did not originally clear up; but in its present form, in a passage of the eighth chapter (viii. 16-19) which we have seen good reason to suspect of interpolation, it informs us to which of the stars in each group the definition of position applies, or which is the "junction-star" (*yogatâra*, star determining the *yoga* or conjunction); it being quietly assumed, in the manner already referred to, that we are familiar with the constitution of the groups, and know that one star in each has been singled out to represent the whole asterism in the calculation of conjunctions.

This is the complete story of the dealings of the Sârya-Siddhânta with the asterisms: we are now prepared to see how much of M. Biot's theory is actually found in the documents from which he supposes himself to derive it, and how much is of his own independent devising.

In the first place, there is nothing in the Siddhânta which teaches or implies that the one mode of treating the asterisms is more ancient, and the other more modern. Both are described together, and in no such manner as seems to contemplate a difference of date, or a discordance of any kind, between them. If the discordance which M. Biot assumes is to be established, it must be by evidence brought in from other quarters; and I hope to be able to show that there is no plausible evidence in its favor, it being derivable only from a misapprehension of the Hindu system, and an antecedent conviction of the derivation of that system from the Chinese *sieu*.

For, in the second place, the treatise gives not the slightest intimation that in the second passage, where the definitions of position of the junction-stars are laid down, any division of the ecliptic into portions is intended. Biot constantly assumes that the circles of declination passing through the junction-stars cut up the ecliptic into those portions which constituted the ancient system of lunar mansions, established for the purpose of marking the daily progress of the moon: and this assumption constitutes the main pillar of that part of his argument which we are now considering. But no such thing is to be found in his authorities, and, so far as I can see, he has obtained it only by a transfer to the

Hindu *nakshatras* of some of the characteristics of the Chinese *sieu*. The latter are, in fact, of this character: the divisions of the heavens are marked and limited by circles of declination passing through the successive single stars of the series: when a planet arrives at one of these circles, it enters into the *sieu*, or 'mansion,' bearing the name of the star with which it thus comes into conjunction; remaining therein until it arrives at the next circle of declination, when it quits the *sieu* in question, and enters the one succeeding, and so on. That the Hindu method of division was ever of this kind I see no reason for believing. The point, however, is one which requires to be examined at some length, since, strangely enough, nearly the same assumption is made by Weber, and constitutes a hardly less cardinal point in his argument than in that of Biot. Weber, too, regards the irregularity of intervals subsisting among the stars whose positions are defined in the astronomical text-books as conditioning an irregular division of the ecliptic into mansions: an equal division, in his view, implies a series of equidistant stars; and wherever he finds reference made to mansions of equal extent, he assumes the recognition of such a series, differing essentially, if not totally, from the groups which constitute the system as we know it. He would not, doubtless, insist upon bringing into the account so exact modes of measurement as by circles of declination, but would hold that, for instance, the moon entered the mansion *Açvinî* upon passing the principal star, or junction-star, of *Açvinî*, and continued there until she came to the principal star of *Bharanî*, and so on. What justifies this assumption, Weber, like Biot, entirely omits to inform us: a most unfortunate and even reprehensible omission, as it seems to me, considering the extreme importance of the point in question; for, if deprived of it, he loses the foundation upon which he needs to give stability to most of his other arguments. I am the more surprised that he has failed to fortify himself on this part of his position, because, in our notes to the *Sûrya-Siddhanta*, we had pointed out the assumption of this mode of division as one of M. Biot's chief errors; thus indicating at least the possibility of doubting its justness in view of all the evidence which had been up to that time elicited. Prof. Weber does, indeed, in one place (p. 316), refer to our view, that the *nakshatras*, instead of being limiting stars, are zodiacal constellations, marking out divisions of the ecliptic by their proximity to them, and he promises that the sequel of his essays shall show its falsity: but I look there in vain for any such demonstration; I only find that he everywhere tacitly accepts and argues upon the other view. We are left, then, to find out for ourselves whence it comes, in the one case as in the other. I have already expressed the conjecture that, with Biot, it was an unconscious ascription

of Chinese characteristics to the Hindu system: I can only suspect farther that Weber may have accepted it from Biot without questioning or testing its authority, and may have made it so long and so undoubtingly an element in his views and reasonings that any other idea does not occur to him as possible. That neither derived it from the *Sûrya-Siddhânta* is very certain: that treatise does not contain it, nor any trace of it, nor any intimation that it was ever known or conceived. As has been seen above, the definition of position of the junction-stars (*yogatâra*) of the asterisms is made in order to the calculation of the conjunction (*yoga*), and this is not treated as the commencement of the planet's continuance in the asterism; it is merely a momentary phenomenon, an aspect of the two heavenly bodies concerned which lasts for an instant, and then is past and gone. The moon, for instance, spends always about a day in the domain of each asterism, the exact time being determined by the rate of her advance in longitude: about once in each day, moreover, she comes momentarily into a state of conjunction (*yoga*) with the asterism itself, considered as a heavenly body, and represented by one of its stars, usually the most brilliant among them. Nor, as one would infer from M. Biot's assumption, does the *yoga* or conjunction occur when the planet reaches the circle of declination passing through the junction-star; were it so, the Hindu astronomers would have been saved a world of trouble, and not a little discredit, which their lumbering and inaccurate process of calculation of the actual conjunction upon a secondary to the prime vertical brings upon them. So ignorant, indeed, is the *Sûrya-Siddhânta* of any implication in its eighth chapter of a mode of division of the ecliptic different from that one which had been taught in its second chapter, that it even gives its definitions of position upon the basis of the equal division. We are not told, for instance, that Rohinî is forty-nine and a half degrees from the initial point of the sphere, but that it is fifty-seven times ten minutes ($10' \times 57$) distant from the beginning of its own portion of the ecliptic: that is to say, that it is nine and a half degrees from the end of the portion called Krttikâ and the beginning of the portion called Rohinî. And so with all the rest; and even more strikingly in the case of some of the latest members of the series, two or three of which fall into the wrong portion, while one has no portion at all. These untoward circumstances cause no difficulty to the author of the treatise; he coolly declares that "[the asterism] Uttara-Ashâdhâ is at the middle of [the portion] Pûrva-Ashâdhâ, and [the asterism] Abhijit at the end of [the portion] Pûrva-Ashâdhâ," and so on, without the slightest suspicion of the frightful confusion he is making, on M. Biot's theory that he is here laying down a scheme of division of the ecliptic into arcs running from star to

star. His implication clearly is that, however he may define the positions of particular stars, he cannot cause any difficulty, or expose himself to be misunderstood, since everybody knows that the ecliptic is divided into twenty-seven equal portions, named in succession from the twenty-seven asterisms, and the idea of a mode of division discordant with this would not suggest itself to any one's mind.

This is the aspect of the case presented in the *Sûrya-Siddhânta*, and, presumably, in the other treatises representing the modern astronomical science: if any of these shows the subject of the conjunction and the definition of position of the junction-stars in a different light, it has not been pointed out; nor does either Biot or Weber make reference to such authority as sanctioning the view they take. As regards the older literature, the exceedingly laborious, careful, and far-reaching excerption of ancient authorities made by Weber in the second part of his essay enables us to say with confidence that they yield no support to the theory: at least, a deliberate and unbiassed search among them has not shown me that they yield any; I can find no expression which appears to require or to suggest a mode of division from star to star. For the most part, the language used is indefinite, and must depend for its interpretation upon evidence from without: a presence of the moon or other heavenly body in a *nakshatra* is stated, without anything to tell us how the presence is to be understood, whether as implying position between the asterism named and its next neighbor eastward, or situation in that part of the ecliptic which lies adjacent to the asterism. The latter is, to say the least, fully as admissible an interpretation as the former.

Having thus seen that the theory which we are considering finds no support from the native Hindu authorities, we shall be fully justified in setting it aside as undeserving of notice, until those who entertain it shall inform us upon what other grounds they base its credibility and claim to acceptance. The burden of proof lies entirely with them. Since, however, it is impossible to summon them to declare the reasons of their faith, we may well enough go on independently to inquire whether such reasons are anywhere to be discovered; or whether there may not be found, on the other hand, weighty considerations which oppose or forbid the adoption of their view.

The most important and decisive fact, which renders it well-nigh impossible that the Hindus can ever have measured their mansions from asterism to asterism, is this: that the Hindu system is from its inception one composed chiefly of groups or constellations. Had we in India, as in China, a series of single stars, there would be some plausibility in the assumption that they divided the different mansions from one another; but the

presence of groups leads us almost inevitably to the conclusion that the division intended was into portions more or less nearly occupied, covered, or pointed out, by the constellations selected; that is, a division of the same kind which we find in the astronomical text-books. To measure from one *constellation* to another, taking the arc intercepted between them, is a proceeding little less than absurd. That the members of the system were actually groups from the very commencement of their history in India need not be proved here, for it neither has been, nor is likely to be, denied by any one: the earliest names and descriptions indicate it too clearly to leave any doubt upon the point. Nor is Weber able to point out a single reference to a *yoga*-star, or an intimation of the selection of such a representative of the asterism, in any authority older than the modern astronomical text-books, whose apprehension of the purpose for which the selection was made is what we have seen it to be above.

Another circumstance telling with some force against this theory is the liberty taken by certain of the astronomical authorities of making, under the same series of stellar groups, special irregular divisions of the zodiac. I refer to those which Biot first cited from Brahmagupta and Varāha-mihira (in the *Journal des Savants* for 1845, pp. 49 etc.), and to which he makes repeated reference in his later articles; Weber treats them in his first essay (p. 309 etc.), and finds traces of them at a date earlier than the scientific reconstruction of the Hindu astronomy.* The real ground and meaning of these strange divisions is as obscure to me now as at the time when our *Sūrya-Siddhānta* was published; but I derive from them the same conclusion as then: that these authorities—who all held, so far as we can judge, the same actual stellar groups with which we are familiar to constitute the series of asterisms—knew nothing of any restriction of the divisions of the ecliptic to the arcs intercepted between star and star. Weber is himself struck by the fact, for which he can furnish no explanation, that the same works of Brahmagupta and Varāha-mihira which give those peculiar divisions of the ecliptic, lay down the positions of the asterisms accordantly with the *Sūrya-Siddhānta*, in palpable ignorance that they are committing any inconsistency or discordance. A strange obliviousness this would be, indeed, if they really meant to divide the ecliptic from star to star; and yet not stranger than that of the *Sūrya-Siddhānta*, which teaches the same irregularity of intervals between the asterisms along with an equable partition of the planetary path; but all difficulty disappears, in each of the three cases alike, as soon as this arbitrary theory respecting the mode of division is relinquished.

Again, we may refer to the starting-point assigned to the modern systems as a noteworthy fact bearing a like significance.

We can speak only of the modern form of the series, since the more ancient one, commencing with Kṛttikâ (the Pleiades), has nowhere had its initial point so fixed by a definition of position that we can tell precisely where it was. In later times, the first asterism is Aṣvinî (the head of Aries). The commencement of that part of the ecliptic constituting its portion is a fixed point, and the point of highest importance in the heavens, since, in the belief of the Hindu astronomers, the movements of all the planets at the creation began precisely there, and since they all return to a conjunction there from interval to interval, as long as time shall last. If, now, the recognized and prevailing mode of partition of the ecliptic had been from star to star, we should expect to find at the chosen initial point the principal star of the asterism Aṣvinî, the one which gave name to the first division. Even if the old method was to be given up in favor of a system of equal arcs, we should look to see at least so much respect shown it as would cause the first point in the new division to coincide with a point of the same name in the ancient division. But, instead of finding at the initial point of the sphere the junction-star of Aṣvinî, we find that of Revatî, so that the whole division Revatî lies west instead of east of its determinant. And the Sūrya-Siddhānta and Çākalya-Saṁhitâ so ignore the desirableness of commencing an asterismal portion from a junction-star, that they make the initial point of the sphere to lie, not precisely at ♐ Piscium, but ten minutes (10') east from it.

Once more, we may adduce the analogy of the Arab system as an argument against the theory under discussion. Between the *manāzil* and the *nakshatras* exists a much closer kindred than between either of them and the *sieu*. Both the two former are chiefly groups of stars, and both are brought into express connection with the moon's revolution—features which either never characterized the Chinese system, or have long since been entirely obliterated from it. But we have no account of an Arab division of the ecliptic by circles of declination, or any other means, connected with single stars; the equal portions of the planetary path are marked by the adjacency of the constellations from which their names are derived.

There remains, so far as I can see, but one ground on which the view of Biot and Weber could possibly be defended. If the mode of division from star to star is obviously the more natural, if it is the one which seems pressed upon us by general considerations of fitness, and which we should, *à priori*, confidently expect to see adopted, then, in spite of all the arguments adduced against it, we should still need to inquire whether it might not have been followed at the outset, and later replaced by the other method. So far, however, from believing this to be the case, I should maintain precisely the contrary. The

analogy of the *sieu*, indeed, appears to lend it a certain degree of support: but then, on the one hand, the *sieu* are single stars, and thus fitted to stand as the limits of division; and, on the other hand, they were employed as assistants in regular and skilled observation, aided by the use of instruments. We have no reason whatever to believe that the Hindus who first employed the *nakshatras* possessed instruments, and had elaborated a system of observation of the heavens; their studies, beyond all question, were made with the eye alone. The closest analogue of the *nakshatras*, as already pointed out, is to be found in the Arab *mandzil*; but a marked similarity, in origin and application, is also to be recognized between them and the signs of the zodiac. These, too, are constellations, or groups of stars, marking out the ecliptic into twelve equal divisions; but the limits of the divisions are far from coinciding with the boundaries of the stellar spaces covered by the constellations. Some of the latter occupy forty to fifty degrees of the ecliptic; others no more than twenty; and the Scorpion, after the separation of the Balance from it, not above ten degrees. Some fairly lie upon and embrace the sun's path; others only touch it with their northern or southern edge; and in one instance a constellation overlaps the ecliptic without being therefore reckoned as one of the zodiacal series. Spite of these irregularities, the system perfectly answered its purpose, which was that of furnishing a sidereal basis for a twelvefold division of the ecliptic, and for so marking the successive portions of that circle that, if a planet were described as being in the Twins, the Virgin, the Scorpion, or any other sign, no one could doubt where in the heavens it was to be looked for. Precisely of such a nature I conceive the *nakshatras* to have been. Upon this point there need be no discordance of opinion even among those who continue to hold the most irreconcilable views respecting the ultimate origin of the Hindu system. Whatever the source from which they came, they appear clearly to have borne to the apprehension of the Hindus the character here pointed out; whether Hindu ingenuity devised them, or whether they were an importation from Babylon, or an altered and corrupted form of a Chinese institution, they were—their derivation being forgotten, or ignored, or, as M. Biot insists on our believing, fraudulently concealed—a series of twenty-seven or twenty-eight stellar groups, serving as basis for a division of the ecliptic into the same number of portions, as nearly equal as the unassisted eye could measure them—or, if sometimes considered unequal, made to supplement one another's inequalities—and regarded as suggested by the moon's revolution and established to mark her progress from day to day through the sky. It may, moreover, be confidently maintained—both against Biot, who thinks that the series could not possibly

have assumed its present form if originally intended to mark the moon's daily motion, and against Weber, who holds that to mark out equal spaces traversed equidistant stars would necessarily have been selected—that the system of asterisms is, in the main, as well suited as any that could be devised to just the purpose of defining the daily stages of the moon's revolution, for a people whose only instrument of observation was the eye. Suppose that such a people, having noticed the moon's nearly equable movement in a certain path through the heavens, and the completion of her revolution in twenty-seven or twenty-eight days, and feeling the impulse to mark and define the stages of her progress, should set themselves to make choice of a means of definition among the stars through which she passed, what would they naturally demand in their selection? I answer: they would be likely to look for groups of stars, as conspicuous as the heavens could furnish in the proper position, so equally distributed that no considerable part of the series should vary from the average place required by a division of the path into nearly equal portions, and not too far removed in either direction from the ecliptic—and that is all. A succession of single stars would not probably have been pitched upon by them; because, in the first place, single stars of any brilliancy, in the desired positions, are absolutely not to be found in the sky; and, in the second place, constellated groups are far more easily described, named, remembered, and recognized. Absolute equality of interval, again, could only be thought of in connection with a series of single stars, and would be neither attainable nor likely to be insisted upon even then. If the moon's motion were quite equable, if she made her revolution in an even number of days, and never departed from the line of the ecliptic, we might conceive the impulse to look for equidistant single stars situated in the ecliptic to be of considerable force. But, in fact, there is the odd remnant of a part of a day more than twenty-seven, or less than twenty-eight, which breaks up the apparent regularity of the moon's nightly movement, so that in any revolution she is at a given time of night several degrees distant from where she was at the same time in the preceding revolution; moreover, her daily rate of motion varies quite notably, and this variation is cumulative, so that in one part of her revolution she is six or seven degrees behind, and, in another part, as much in advance of her mean place: nor are this retardation and acceleration, as in the case of the sun, constant in position, always taking place sensibly in the same part of the heavens; on the contrary, as her line of apsides revolves once in a little less than nine years, the variations of motion are rapidly shifting their action, and the moon may be, in parts of her course, a whole asterism in advance of or behind the position she occupied in her revolu-

tion four and a half years before, when of precisely the same sidereal age, or just as long after passing the initial point of the sphere. Again, the moon revolves, not in the ecliptic, but in an orbit which is inclined to that circle a little more than five degrees, and the line of her nodes makes the circuit of the heavens once in about eighteen years: so that if, at any time, a line of stars had been selected just upon her path, she would pass them, nine years later, at distances ranging all the way up to ten degrees. Finally, we must not leave out of account the fact that, during a considerable part of each revolution, the brilliancy of the moon's light is such as to obliterate entirely all but the brighter stars with which she comes closely in contact or near to which she passes, and the fainter ones at a still greater distance; so that to mark her movement by such stars only as are to be found immediately along the ecliptic would be unpractical; they could seldom be seen when she was close upon them, and often not when she was still at a distance of one or two asterisms to the eastward or westward. All the conditions, then, which would postulate a choice of single stars, or of stars or groups separated by precisely equal intervals, or confined to the immediate vicinity of the ecliptic, are so entirely wanting, that no *a priori* probability of the construction of such a series can be claimed; its existence in any nation could only be established by direct and unequivocal evidence—which has been shown above to be undiscovered as yet on Indian ground.

My view of the Hindu asterisms is accordingly in nearly all essential respects the same with that expressed in the notes on the *Sūrya-Siddhānta*: that they are, from the very beginning of their traceable history in India, a series of groups of stars, so pre-vaillingly correspondent with those which are laid down by the later astronomical text-books as to be, notwithstanding one or two more or less distinctly traceable alterations, identically the same system; that they were looked upon as having been selected, for their number, their distribution, and their nearness to the moon's track, in order to mark the progress of that luminary along or near the ecliptic, distinguishing the portions of the heavens which she successively traversed; that under them the planetary path was regarded as subdivided into twenty-seven equal portions, yet by the eye alone, and without any of that precision and fixedness which are given by the habit of observing with astronomical instruments; that when, finally, a new and more exact astronomy had been brought in from the West, when the moon had been reduced in significance to one of a class of planetary bodies, all whose movements were capable of being predicted, and their places at any given time determined; when their conjunctions with one another had been made the subject of astrological speculation, and the calculation of them

taught by an elaborate system of rules,—that then the need was felt of treating in the same manner these star-groups, which had so long been the object of the Hindu astronomers' peculiar attention and veneration; that thereupon a selection was made of one star in each group, to represent the group in the calculation of conjunction, and hence to be called its junction-star; and that the position of the stars chosen was in such manner defined by astronomical coördinates as to render the calculation possible. The time at which this definition was made is the one date which is more certain than any other in the history of Hindu astronomy; the evidence presented at the end of our note to verses 2-9 of the eighth chapter of the *Sûrya-Siddhânta* will satisfy any one that it must have been not very far from A. D. 500. If there was any earlier definition, reckoned from another equinox, for which this one, recorded with unimportant variations in all the astronomical text-books, is a later substitution, no trace of it is known to have been discovered; nothing gives us reason to believe that it ever existed.

I shall now proceed to answer in detail some of the objections which M. Biot urges against this view—or rather, against the view which he assumed to be held by those Indianists who did not implicitly adopt his theory: for I do not find that he comprehended, as certainly he did not attempt to state, precisely what was believed by those who did not believe with him. That it implies, as he repeatedly asserts, any mode of astronomical observation which the ancient Hindus cannot be supposed to have known and put in practice, is palpably not the case; it contemplates no mode of study of the heavens which is not both possible and natural to all nations who have eyes and the power and disposition to direct them toward the heavens. Foot-hold can be won for this objection only by an arbitrary and impossible transfer of that definition of positions which was demonstrably made five centuries after our era to the earliest period of the history of the institution in India. That the Hindus of the time of the *Brâhmanas* did not deal in *vikshepa* and *dhruvaka*, or distance from the ecliptic on a circle of declination and distance of that circle on the ecliptic from the vernal equinox, will be readily granted. And yet it is by no means clear that they ought not to have done so upon M. Biot's theory. He holds that this peculiar system of coördinates is so distinctively Chinese in its character that it must have come directly from China into India, along with the "ancient *nakshatras*," in connection with which it appears in the eighth chapter of the *Sûrya-Siddhânta*; and he asserts that the restriction of its use to the *nakshatras*, and its inconsistency with the general modes of observation of the Hindus, employed in other cases, are plain proofs of its foreign origin. We must believe, then, that the tradition of this

method of definition was religiously retained in India through all the long centuries during which the Hindus never employed it, and did not even preserve the data which it had originally yielded; and that, five centuries after Christ, when they had received from another quarter a complete astronomical system, and had new means and modes of observation, they still could not prevail upon themselves to observe the *nakshatras* otherwise than in the original Chinese manner, when they had to determine their places anew to make them fit into the modern system! How very implausible, not to say untenable and absurd, this supposition is, need not be pointed out. But we are not left upon this point to the consideration of implausibilities alone. Biot's statements that the mode of definition in question is confined to the *nakshatras*, and that it differs from that usual in other cases, are so utterly the reverse of true, that I cannot at all understand how he could allow himself to put them forth. If he had taken the trouble to look at the very next passage in the *Sûrya-Siddhânta* (viii. 10-12) to that in which the junction-stars of the asterisms are located in the heavens, he would have found other fixed stars located in the same manner: they are but few, it is true; but that is because the Hindu astronomy was not curious to concern itself with any others. For, again, if he had glanced through the whole treatise, he would have seen that it contains no trace of any other and different method of obtaining and defining positions by actual observation. The planets, it is true, have not their places laid down in this way, but it is for the reason that their situation is never to be determined by observation; it is obtainable by calculation from the data given in the treatise, which does not contemplate such a lack of faith in the astronomical student as should send him to the heavens to test the correctness of his inspired text-book. But the general treatment of the two modes of ascertaining the positions of the heavenly bodies, and the nomenclature applied to them, are such as show that they were looked upon as concordant, and the nearest approach to identity which the nature of the case permitted. The subject of the astronomical coördinates and their nomenclature is peculiar enough to justify a few words of explanation here. For "longitude" and "latitude," for "right ascension" and "declination," strictly speaking, the *Sûrya-Siddhânta* and the other text-books of its class, so far as known to me, offer no equivalent terms. The right ascension of any point on the ecliptic, but only on the ecliptic, may be approximately determined according to the methods of the treatise, by the awkward datum of the time occupied by the sign in which the given point is situated in rising above the horizon "at Lankâ," i. e., at the equator (see *Sûrya-Siddhânta*, iii. 42-49, and notes): it is used only in order to obtain the oblique ascen-

sion of the same point, and to determine what point of the ecliptic, at a given moment, is upon the meridian or at the horizon. Declination (*apakrama*, 'removal' from the equator) is also found only for the ecliptic, which is called the "circle of declination" (*apakramamandula*, etc.). For the longitude of a planet, or its calculated position in the ecliptic, we have no term whatever, but only the name of the planet itself: thus, performing certain operations, we have as a result "the planet," i. e., its longitude; we subtract Mars from Jupiter, to find the distance between them; we add six signs to the moon, to find the opposite point in the ecliptic, etc., etc. The technical language comes nearest to offering a synonym for the term latitude: it employs the word *vikshepa*, 'throwing off, dissection,' to designate that removal of a planet from the ecliptic which we call latitude, and which, in the Hindu view, is the distance to which the planet is thrown off from its proper track, the "circle of declination," by the influence residing in its node. But so little is the true value of this datum, and its peculiar character as measured upon a secondary to the ecliptic, present to the Hindu's mind, that we are taught, in order to find a planet's "corrected declination" (or, as we should call it, its declination), to add this *vikshepa* directly to, or subtract it from, the *apakrama*, or the declination of the point on the ecliptic occupied by the planet in longitude, as if the two were homogeneous. With this inaccuracy corresponds the fact that one of the coördinates by which the positions of the junction-stars are defined, the distance from the ecliptic on a circle of declination, is also called simply *vikshepa*: it is not acknowledged to be in any such manner different from the actual latitude of the planets as to need to be called by a different name. The term employed to designate the other coördinate likewise implies its homogeneity with the calculated longitude of the planets: it is styled *dhrūva* or *dhrūvaṅga*, 'fixed, immovable:' whereas, namely, the planets are in constant revolution, ever changing their situation in the ecliptic, the junction-stars have their single "fixed" place upon that circle, which, having been once stated, is thenceforth always employable in calculations involving the positions of the asterisms.* The conclusion which will be drawn from this exposition by every unprejudiced person is, I am confident, that the coördinates in question wear no aspect of a Chinese or other foreign origin, but, at most, only indicate by their character the style of observation by means of which the positions of the junction-stars were determined, showing them to have been

* This explanation of the term *dhrūva*, as designating the "polar longitude," or "apparent longitude," of a *nakṣatra*, appears to me now so obviously and incontrovertibly the true one, that I can only wonder that it did not suggest itself to us when engaged upon the *Sūrya-Siddhānta*.

found by means of a meridian-circle, or something of equivalent character. If, indeed, it could be proved that the Hindus were unable to devise and put in execution such a method of observation as this—a method so feasible and natural, and adapting itself so well to the processes of calculation taught in the third chapter of the *Sûrya-Siddhânta*—or that they could have learned it from no other than Chinese teachers, the ground taken by Biot might be less untenable; but this I cannot conceive to be possible: the Hindu astronomers of the third to the sixth centuries of our era, who had long been sitting at the feet of Greek science, were not dependent on a miraculously preserved tradition of Chinese methods for the means of fixing the places of their asterisms.

M. Biot involves himself and his readers in a maze of difficulties with regard to the interpretation of the now well-known statement made in the *Jyotisha*, the earliest of extant Hindu astronomical treatises, which fixes the position of the solstices at the beginning of *Âçleshâ* and the middle of *Çravishthâ*, because he will not open his eyes to see that the statement implies that division of the ecliptic into twenty-seven equal parts of which he has chosen to deny the antiquity. This implication admitted, the two points referred to are seen to be opposite to one another upon the ecliptic, and all difficulty vanishes.

The absence from the astronomical systems of the *Siddhântas* of any division of the ecliptic corresponding to the asterism *Abhijit* is still explained by Biot as owing to the disappearance of that division in the course of the tenth century, by the coincidence of the circles of declination of its junction-star and that of the next asterism. He takes no notice of the considerations which, in the notes to the *Sûrya-Siddhânta*, we had urged against the admissibility of such an explanation, and which I cannot but regard now, as then, as entirely conclusive of its errorneousness. If they needed any farther aid to make them so, they have since found it from Weber, who shows that the omission of *Abhijit* is much more frequent than its inclusion in the series, even back to the very earliest traceable period of the history of the *nakshatra* system in India.

I have thus endeavored to show that the rectification of M. Biot's misapprehensions of the *nakshatra* system deprives of all ground and value one main division of the evidence upon which he claims to have proved the non-originality of the system in India, and its derivation from the Chinese *sieu*. Those who believe with him, however, will claim that the strength of his position is not seriously shaken. He has still his stronghold of the Chinese astronomy; if he has proved, by historical and scientific argument, that the *sieu* are an institution of native growth, we shall be forced to the acknowledgment that, medi-

ately or immediately, they must have been the originals of the *nakshatras*. It is necessary, then, to submit this second division of the argument to a brief examination, and to see whether it possesses the cogency and conclusiveness which is claimed for it. In the general discussion of the subject presented in the notes to the *Sūrya-Siddhānta*, we refrained from entering upon this question at all: such a course is now no longer open, since, although I have made no original investigations bearing upon the points in discussion, I have before me, on the one hand, Weber's critical objections, contained in the first part of his essay on the *nakshatras*, and, on the other hand, the new detailed exposition of the history of Chinese astronomy which was drawn up by M. Biot—partly, as he states, in answer to our expressed misgivings—and which he regarded as sufficient to satisfy our doubts: if these are nevertheless unremoved, it is incumbent upon us to state the grounds of our continued incredulity.

This portion of M. Biot's argumentation also divides itself into two parts: the archæological and historical, founded on Chinese literary documents and records; and the scientific, founded on calculation and the facts of astronomical science. To the former part, Weber, in the first of his two essays, has brought up elaborate critical objections, maintaining that the *sieu*, as a system of twenty-eight determinants, or fundamental stars, are not traceable in the Chinese literature farther back than Lü-pu-wey, about 250 B. C., and that, according to its ancient and original Chinese arrangement, the series begins with Mao or the Pleiades, as Biot everywhere reports it, and with Kio or Spica Virginis. Now, whether agreeing or disagreeing with the objector in single points and matters of detail, few philologists, I think, will be inclined to deny these two propositions: first, that Weber's criticisms are of no small force, and must, until refuted, be regarded as seriously damaging Biot's argument; and second, that the latter, in his new exposition of the Chinese astronomy, presented in his last series of articles, has furnished no satisfactory reply to them. Biot does not, indeed, attempt to meet and repel his adversary on the latter's own ground, nor was such a thing to be expected of him, considering his entirely different training and habit of mind. As Weber had declined to meet him in the field of mathematical argument, acknowledging himself unequal to the encounter, and opposing to him a simple disbelief in the possibility of proving historical facts by such evidence, so he conceived himself justified *à fortiori* in casting out as naught the doubts of a skeptical philologist, when weighed against his own positive scientific arguments, and the probabilities which to him seemed derivable from the general history of astronomical science in China. He accordingly

presented anew the same view of that history which he had given twenty years earlier, with no new fact or argument of any importance, and was content to rest his case upon it. But one who looks with a less partial and interested eye upon the exposition will be slow to draw from it any confident conclusion in favor of the antiquity of the system of determinant stars. If the witness of the Cheu-li be ruled out, as of too questionable value to be relied upon, in view of the suspicious character and history of that work, Biot's whole argument is mainly reducible to this: the Chinese people are so fixed and unchangeable in their ways, they have so constantly made astronomy and the regulation of the calendar a matter of prime importance, even laying stress upon it as a political institution, and it is so interwoven with their immemorial religious rites and observances, that—the system of the *sieu*, so essential an element of their later science, must have been of primeval antiquity among them. Now this is a conclusion which the argument is palpably too weak to sustain: we may believe all that M. Biot claims in favor of the antiquity of astronomical observation among the Chinese, without allowing that their science started in full possession of all the methods and appliances which it is found to use in later times. It is nowhere made to appear that the scientific results reached, or the religious ceremonies described, are either dependent upon, or intimately connected with, the employment of a certain number and series of fundamental stars. This last is only an element in the methods of observation made use of, a practical detail, and I see not why it might not have been introduced at any time without derogation to the fixity of Chinese political and religious institutions. Biot claims that the series was expanded from twenty-four to twenty-eight about 1100 B. C., after having subsisted for twelve centuries in its simpler form. If the primeval and unchangeable institutions of China could bear such a shock as this, we might trust them to endure the still greater one of the introduction of the whole system at a later date than M. Biot thinks could be allowed. They were not so unalterable as not to yield to the powerful influence of European science, represented by the Jesuit missionaries: these learned and adroit men succeeded in introducing Western modes of observation, and revolutionizing the construction of the Chinese calendar, only a century or two ago; but M. Biot points out no revolution in rites and ceremonies as accompanying a change compared with which the adoption of a series of fundamental stars whereby to note meridian transits is as nothing. As regards the appearance of the *sieu* in the Shi-King and the Shu-King, I am entirely of the opinion of Weber: that the mention in those works of stars or constellations which in part bear the same names with some of the defining-stars of the later

system, and in part are identified with others of them by the commentators, does not in the least prove the subsistence of the system at the time; it only proves that the Chinese, industrious observers of the heavens as they seem to have been from a very early period, had already noticed and named some or all of the stars and constellations in the neighborhood of the ecliptic which are afterwards found to form a part of the series of the *sieu*. The exhortation of the mythical emperor Yao to his court-astronomers to walk forth in four different directions, and observe the equinoxes and solstices, is too obviously and grossly apocryphal to be seriously regarded. I do not, indeed, find of much account the difficulty which Weber puts in the front rank: namely, that the stars indicated as to be observed for the fixation of the points in question are not the stars at which those points are severally situated, but lie in each case ninety degrees eastward of them: we may, I should think, admit without scruple the explanation of the commentators, that the four stars mentioned are to be observed in the meridian when the point which each should mark is in the horizon, at sunset: we cannot, indeed, well suppose that the author of the imperial mandate meant anything else: but that the sage emperor should have overlooked the two important facts that meridian transits are not observable when the sun is on the horizon (unless with the aid of a telescope, of which he says nothing), and that the stars mentioned would not in all the four cases be upon the meridian at the setting of the sun in the equinoxes and solstices, is much less likely than that the later historian who put the words into his mouth should have been oblivious of them. The only conclusion derivable with any confidence from the record is that tradition or retrospective calculation had fixed with approximate correctness the positions of the equinoxes and solstices at the period assigned as that of the reign of Yao.

If the documentary part of M. Biot's argument is thus found unsatisfactory and inconclusive, let us see how the case stands with the scientific part. And here I would first remark that Prof. Weber, in my opinion, was more distrustful of his ability and right to enter as a critic into this department also, than he needed to be. There is no such peculiar character attaching to astronomical evidence upon historical points as should deny to a man of sense, learning, and critical judgment, the capacity of forming a competent opinion upon its cogency. It is not for the philologist to dispute the methods and formulas of the astronomer, and assume to reject his actual scientific results; but he may be as well qualified as the other, in a host of cases, and he is likely often to be much better qualified, to decide what is proved and what is not proved by the results attained. Few fallacies are of more frequent application, or have wrought more

mischievous, than that expressed in the proverb "figures cannot lie:" in a certain sense it is true enough; but there is no falsehood or absurdity so great that it may not be seemingly backed up and supported by a great deal of multiplication and division of irreproachable accuracy. And it does the highest credit to the candor and fairness of M. Biot that he has set forth with such admirable clearness the whole ground-work and detail of his astronomical evidence as to put it in the power of persons not possessing the thousandth part of his scientific knowledge to follow the steps of his argument, and form an independent judgment respecting their connection and tendency. He has, in the first place, determined, by means entirely within his competency, that at the period to which Cheu-kong is assigned, or 1100 B. C., the equinoxes and solstices occupied certain positions in the ecliptic, nearly coinciding with the determinants of the four *sieu* named Oei (35 Arietis), Lieu (δ Hydræ), Ti (α Libræ), and Nü (ϵ Aquarii), their distances from those stars ranging only from one-third of a degree to a little over three degrees. When, however, he goes on to claim that Cheu-kong, on account of the coincidence thus pointed out, added these four stars to the system of the *sieu* as it existed before his time, thus raising it from twenty-four to twenty-eight members, we who are unversed in astronomy have a right to sit in judgment on the inference, and to pronounce it fairly or unfairly drawn. To me, I must confess, it seems a good deal more than doubtful. Were there a well-attested Chinese record or tradition of the fact of the addition, we should accept M. Biot's calculation as a satisfactory and sufficient confirmation of it. But nothing of the kind is to be found. That the later Chinese, after the Christian era, report Cheu-kong as having observed the winter solstice in the second degree of Nü, is nothing to the point. Supposing him actually to have made the observation reported, the fact would not even prove that he knew the system of *sieu*, since the later astronomers, to whom the system was familiar, would naturally state the observation in that way, however it might have been originally described; far less would it be any indication that he went on to increase in consequence the number of the *sieu*: on the contrary, we might reasonably expect to find, along with the tradition of the observation, the tradition of so important a change resulting from it. That, in a series of twenty-eight stars equably distributed about the contour of the heavens, four should be at a distance of about ninety degrees from each other, so that, when a solstice pretty closely coincided with one of them, the opposite solstice and the equinoxes should nearly approach the others, does not seem so very strange as to forbid us to believe that all the four might have been old constituents of the series. If the origin of the system is that which all

those who disagree in opinion with M. Biot claim it to be, the groups including these four Chinese determinants are entirely in place, and could not well have been passed over in making the selection of the asterisms. This is especially true of Ti , the southernmost of the two bright stars α and β *Librae*, the most conspicuous constellation situated upon or near the ecliptic between *Spica* and *Antares*. If M. Biot's explanation of the selection of the other twenty-four determinants rested upon an impregnable foundation, and absolutely excluded these four, so that we were compelled to cast about us to see where they could have come from, the suggestion that Cheu-kong put them in for the reason assigned would be very welcome; but, in the absence of other corroborating evidence or favoring probabilities, we are both authorized and required to demand clear and unequivocal testimony from this quarter. The twenty-four stars constituting the original system are by M. Biot, as is well known to all who have had occasion to pay any attention to this subject, held to have been selected by the Chinese about 2357 B. C., upon two grounds: their proximity to the equator of the period, and the near correspondence of their circles of declination with those of the principal circumpolar stars. The Chinese of a still earlier period, Biot would have us believe, had been in the habit of particularly observing the circumpolar stars, of noting their transits across the meridian, and of comparing therewith the transits of other stars. In the gradual improvement of their processes, they hit upon the plan of taking their fundamental stars nearer to the equator, for the sake of greater facility and accuracy of observation; but they were still so far under the dominion of their former method that they made choice of such new stars as were virtual representatives of the old ones, standing upon nearly the same circles of declination. It is here again, first to be noted that all this is pure hypothesis on the part of M. Biot, and not in the least founded upon any record or tradition in the Chinese literature. No Chinese author has been shown to attempt to give the time or the manner of the first establishment of the series of *sieu*, or to explain the motives of their selection. Hence, as before, we cannot help demanding a higher degree of force and cogency in the internal evidence than if it were brought in merely as auxiliary to documentary evidence. It needs more unequivocal proof to establish a theory fabricated in Paris in A. D. 1840 as to the reasons of a work performed in Lo-yang more than four thousand years ago, than would suffice to give credibility to an account of the matter which those who performed the work appeared to have themselves handed down to the after world. And, for my own part, having begun to examine the alleged proofs with a prepossession in their favor, and having been long conscious of a struggle

against my doubts and misgivings, I must say that I now consider them totally insufficient. In the first place, as regards the proximity of the determinants to the equator: one has only to look at the table of coördinates of the whole system for B. C. 2357, given in Biot's first series of articles and repeated in his last series, and to cast his eye down along the column of declinations, to be startled by meeting with distances from the equator rising as high as over twenty degrees. In fact, the average of the declination of the determinants is nearly nine degrees ($8^{\circ} 52'$), while that of their latitude, or distance from the ecliptic, is only a little over ten degrees ($10^{\circ} 12'$). This difference is obviously too small to serve as the foundation of any convincing argument for their selection with reference to the equator, especially when the different requirements in the two cases are considered; those who had to choose along the fixed line of the equinoctial circle, and were willing to go as low as stars of the fifth magnitude in their choice, should have managed to attain a very much nearer average vicinity than those who, as has been pointed out above, had to look for conspicuous groups, and did not feel bound to the immediate neighborhood of the ecliptic. Moreover, if for the three stars (α and ν Hydræ, and α Crateris) which are peculiar to the Chinese system, and apparently variations from the original, be substituted those which there is good reason to regard as having belonged to the latter (α , ϑ , and β Leonis), the relation is inverted; the principal stars of the original asterisms average nearer to the ecliptic than do the Chinese *sieu* to the equator of B. C. 2357. Even the Hindu junction-stars, despite the introduction among them of such remote stars as those of the Lyre, the Eagle, and the Dolphin, average but twelve degrees and a half from the ecliptic. A like conclusion may be drawn from a simple ocular examination of our stellar chart showing the positions and relations of the three systems of asterisms, given in the notes to the *Sûrya-Siddhânta*, and upon which the position of the equator of B. C. 2357 is accurately laid down. The first three members of the series, indeed, follow quite closely that circle; but the next three still more notably disregard it. With the seventeenth member, again, begins a line of stars following a course of its own, far southward of the equator, which it does not approach at all nearly until the twenty-fourth *sieu* is reached; from that point to the end, the coincidence is tolerably close. The whole strength of Biot's argument evidently lies in the position of the eighth, ninth, and tenth members, which are those referred to above as being apparent deviations from the original series: were it not for these three, I greatly doubt whether M. Biot himself would ever have thought of the equator of B. C. 2357 as a factor in his hypothesis. But they are not enough to give effective support to so

momentous a conclusion, especially considering their doubtful character, and the possibility and plausibility of the conjecture that they may have been substituted for the more ancient asterisms by the Chinese, at a vastly later date than B. C. 2357, for reasons of their own—as on account of their forming a more natural line of transition from the seventh *sieu* to the eleventh, and approaching much more nearly to the equator of that later time also when a borrowed system of lunar asterisms was converted into a series of right-ascensional fundamental stars.

We come next to consider the other motive of selection, the correspondence of the *sieu* in right ascension with the circumpolar stars. The best way, doubtless, to test and judge the validity of M. Biot's conclusions upon this point will be to examine in detail a sample of his reasonings. They are given in one of the tables* which form part of his earliest series of articles. He begins with the division *Hiiu*, marked by β Aquarii, for the reason that it is nearest to the winter solstice, the point which the Chinese have long been most solicitous to fix, and upon the determination of which they have based their calendar. The division *Hiiu* comprehends ten degrees of right ascension; its determinative does not at all closely agree with the solstice, but is (as is also pointed out in Biot's last articles) nearly seven degrees from it: the division also includes the inferior transits of the two bright circumpolars γ and δ Ursæ Majoris, but its limits by no means coincide with them; the one is six and a half, and the other seven and a half degrees distant from its commencement. If any ground is here to be discovered for the selection of β Aquarii as the limiting star of the *sieu*—it having at the same time nearly fifteen degrees of south declination—I, at least, am entirely unable to find it. The determinant of the next station, *Goei*, is α Aquarii; it is nearly three degrees east of the circle of declination of δ Ursæ Majoris, which we are taught to regard as having determined its selection, and its southern declination is thirteen degrees; the station extends almost nineteen degrees, to the circle of ϵ Ursæ Majoris. This is held to have fixed the choice of the next determinant, *Che*, or α Pegasi, and the coincidence of the two stars in right ascension is this time as close as could be desired. Biot brings also into connection with *Che* the inferior passages of 42 and 184 Draconis; one hardly sees why, the stars being so small as to be almost invisible to the naked eye, distant two and five degrees respectively in right ascension from the determinant, and

* "Table of the relations which have existed between the meridian passages of the twenty-eight stellar divisions of the Chinese, and the passages, superior or inferior, of the circumpolar stars, in the proleptic Julian year -2357, the presumed epoch of the emperor Yao, under the parallel of 34° to 46° ." *Journal des Savants*, April, 1840, pp. 246-264; pp. 74-82 of the separate impression.

having less than two degrees of polar distance. The limiting star of the next *sieu*, Py, is γ Pegasi; it was chosen, we are to believe, on account of its relation to the superier transit of β Ursæ Minoris, and the inferior of ζ Ursæ Majoris. The interval between these two transits is six degrees, and is nearly halved by the circle of declination of the determinant, which is two degrees from the one, and four from the other. Here, again, the plausibility of the argument is of the very faintest character: if the relation of the determinant to the circumpolars is to be one of such laxity and variability, if the circle of declination of the former is sometimes to coincide nearly with that of one of the latter, sometimes to fall midway between two of them, and sometimes to be so fixed that the *sieu* shall contain them, it is obviously easy to find reasons for the selection of a good part of any possible system of limiting stars; there will only now and then present itself an unmanageable case, resisting all attempts at explanation. Such a one is very near occurring at this point. For M. Biot is not a little doubtful as to how he is to account for the choice of ζ Andromedæ as determinant of the next station, Koei, and the consequent limitation of the station Py to nine degrees. The suggestion that it was for the purpose of shutting up the passages of β and ζ , above referred to, within a narrow space, fails to satisfy his mind, and with the best reason. He is also not content with the agreement of ζ Andromedæ in right ascension, within two degrees, with 5α Ursæ Minoris. On the whole, he thinks it most likely that the intention was to mark the point situated forty-five degrees from the solstice, a point which is hit within two degrees and two thirds by the selection of the limiting star Koei. The next determinant, β Arietis, introducing the mansion Leu, actually agrees very closely in right ascension with α Ursæ Minoris, our present pole-star, but then twenty-five degrees from the pole: yet M. Biot hardly seems to lay so much stress on this coincidence as on the fact that 10ι Draconis, a star of the fifth magnitude, and less than two degrees from the pole, had crossed the meridian a little more than three degrees earlier. The following station, Oei, is marked by 35 Arietis, or α Muscæ, which has no relation to any circumpolars, and is regarded by M. Biot as added to the system by Cheu-kong, 1100 B. C., in the manner already related. The mansion Mao has as its determinative η Tauri, or Alcyone, the most brilliant of the Pleiads, which nearly marks the equinox of B. C. 2357, and is therefore made by Biot—as Weber maintains, without any support from his Chinese authorities—the commencement of the series. The farther limit of the mansion, ϵ Tauri, was fixed, we are told, so as to “include” the inferior transit of α Draconis; and the more brilliant Hyad, Aldebaran, was neglected because it was four degrees

farther eastward, and so much more distant from the transit in question. But between the circles of declination of α Draconis and ϵ Tauri itself is an interval of four and a third degrees, so that δ or γ , we should think, ought to have been taken instead of ϵ , either of them answering better the required purpose. If it be objected that α Draconis was but two and a half degrees from the pole, and that hence the Chinese might easily have blundered a few degrees in referring its transit to the equator, I should willingly admit the force of the objection, but should claim, in addition, that it might also have excused the selection of Aldebaran itself; and farther, that this whole supposition of close observations made by the Chinese, twenty-five hundred years before Christ, upon the transits of stars situated but a degree or two from the pole, and of their determination of equatorial stations thereby, is void of any tolerable plausibility. The length of the station Pi, marked by ϵ Tauri, is eighteen degrees, owing, Biot thinks, to the absence of any remarkable transit of circumpolars. Next we come to a perfect nest of difficulties. We have two narrow stations, Tse and Tsan, which together occupy only a little more than six degrees of right ascension, followed by a third, Tsing, which includes the great space of over thirty degrees. The determinant of the first mansion, λ Orionis, is pretty near the equator, but that of the second, δ Orionis, is thirteen and a half degrees to the south of that line, and that of the third, μ Geminorum, is more than twelve degrees in the other direction from it. Here, one would think, is an opportunity for our astronomer's mode of explanation to display its power and value: if it can furnish a satisfactory account of so anomalous a condition of things as this, we can hardly avoid acknowledging that it is well-founded, and worthy of credence. But it can do no such thing; it breaks down entirely, and has not a single reasonable word to say for itself. The only circumpolar transit which has any relation to the transits of the three limiting stars Tse, Tsan, and Tsing, is that of α Draconis, of the third magnitude, and eight degrees from the pole, and M. Biot, with the frankness and good faith which one cannot but constantly admire throughout his whole exposition, confesses that it has in the ancient Chinese catalogues no distinctive appellation, showing that any particular attention was ever paid it. Nevertheless, he thinks the mansion Tse, of less than three degrees, may have been established to "include" it—it makes its transit within half a degree of the termination of the station—and that the mansion Tsan, of about three and a half degrees, may have been established to "include" its transit at a somewhat earlier period, when its circle of declination reached the equator farther eastward! As to the choice of μ Geminorum as limiting star of Tsing, M. Biot can produce no reason

which justifies it, and he also records his wonder at the selection of the two preceding determinants, when brilliant stars in Orion were to be had for the asking. This scantiness of circumpolar relations as justification of the three crowded determinatives Tse, Tsan, and Tsing, is set in still stronger light by contrast with the one next following, δ Cancr. Any good reason for the choice of this particular star as western limit of the mansion Kuei M. Biot finds it "impossible to conceive," since the magnitude of the star is but fifth to sixth, so that it is hardly discernible by the naked eye, and since it is also twenty degrees and a half from the equator of B. C. 2357; but the position of its circle of declination, and the extreme length of the station Tsing, he regards as altogether justified by reference to the superior transits of α and β Ursæ Majoris, which had to be waited for before the station could be closed. But, by his own account, the interval in right ascension between these two stars is more than eleven and a half degrees, and the circle of declination of the limiting star of Kuei, in order to apply to them both, is compelled to fall nearly midway between them, or about seven degrees to the eastward of the one, and five degrees to the westward of the other. We see, then, that, in order to save the credit of M. Biot's hypothesis, we shall be obliged to allow that the faint and undistinguished star α Draconis could give locality to two or three determinatives, and fix the limits of as many mansions, while the brilliant α and β of the Great Bear, two of the most conspicuous of the circumpolars, and differing near twelve degrees in right ascension, could be represented at the equator by but a single star, and that one nearly invisible, and over twenty degrees from the equator! I am persuaded that the majority of unprejudiced critics will think, with me, that a theory which can only be retained at the cost of such violent assumptions as this had better itself be abandoned. But it must not fail to be noted farther that the circle of declination of β Ursæ Majoris is within less than two degrees of that of δ Hydræ, the determinative of the next station, Lieu, and their agreement is pointed out by M. Biot, and left to be alternatively regarded as the ground of selection of the latter star: he forgetting for the time that this is one of the four which he had already shown to have been added to the system by Cheu-kong, more than twelve centuries later. So that the determinant of the station Lieu, which had once been "proved by scientific evidence" to be of Cheu-kong's choice, is here exhibited as having had a notably better claim to selection by Yao himself than was possessed upon the average by the twenty-four stars actually singled out by that sage emperor.

It is unnecessary to push our examination farther. We should meet, perhaps, with nothing quite so tellingly and un-

mistakably subversive of M. Biot's theory as that which is furnished us by the discussion of its application to these last few members of the system of *sieu*, but we should also meet with nothing more unequivocal in its favor. He who, after a careful survey of the whole exposition, can think that we have "positive scientific evidence" to the effect that the emperor Yao selected twenty-four of the twenty-eight *sieu* in the twenty-fourth century before Christ, and that Cheu-kong added the other four, thirteen centuries later, must estimate in a very peculiar manner the nature of scientific evidence and its application to the solution of historical questions. I do not hesitate to express my utter want of faith in the whole argument. In my view, what M. Biot has done may fairly be described as follows: he has reduced the *sieu* from twenty-eight to twenty-four by an arbitrary excision, and relegation to a later period, of four of their number; he has set up a list of nineteen circumpolar stars, whose upper and lower transits he assumes to have been observed with special care by the ancient Chinese, although he confesses that in some cases he can find no documentary evidence of the fact, and although several of them are so close to the pole that their observation in such ancient times, with such means as could be then applied, is in the highest degree questionable: these nineteen stars give him thirty-eight transits: he has then forced the twenty-four limiting-stars into an artificial and imaginary relation to the thirty-eight transits, by allowing the former to have been established, sometimes for the purpose of coinciding with, sometimes for the purpose of including, the latter; leaving, after all, some of the most important transits unrepresented by *sieu*, and having to confess that some of the *sieu* find no sufficient explanation in the transits. There are, indeed, a few rather curious and striking coincidences brought out by the comparison, and these, beyond all question, suggested to Biot his ingenious and captivating hypothesis; but they are more than may with entire plausibility be supposed the result of chance, and are utterly insufficient to convert the hypothesis into an acceptable and credible explanation.

But if M. Biot's attempt to establish and account for the origin of the series of *sieu* in its present form at the remote date of the emperor Yao be deemed a failure, and if the essential identity of the Chinese *sieu*, the Hindu *nakshatras*, and the Arab *mandzil*, be conceded—a concession to which, I should think, no objection of any significance can be opposed—then it cannot be reasonably doubted that the system originally had that form and intent which we find it still to possess in Arabia and India: it was a series of stellar groups equably distributed along the ecliptic, and selected for the purpose of approximately marking the daily progress of the moon—thus constituting to all intents

and purposes a true lunar zodiac; which, however, like the solar zodiac of twelve signs, was equally applicable, and more or less from an early time applied, to observation of the movements of the other planets, and to all the purposes of a general stellar division of the heavens. The question still admits of being mooted, by those who are jealous for the honor of China as the first home of the system, whether the Chinese may not have devised it and communicated it to other peoples in this its original form: but there can hardly remain a doubt that the shape which it now wears in China is the result of an alteration, made some time later than its origination or its reception from abroad. Evidence may perhaps yet be found in the Chinese authorities, to the effect that the names of the *sieu* were first used to indicate constellations rather than single stars. Biot himself gives us a valuable hint in this direction. At the foot of his second table, in the article of April 1840 (pp. 72-3 of the separate impression), he gives the meaning of some of the *sieu* names, and nearly all of them would fit groups better than single stars, while one case is a very plain one: Pi, the name of the second determinant, ϵ Tauri, he tells us, means 'a thread or string' (*le filet*), "which is the figurative designation of the Hyades." In view of the Indian and Arabian aspects of the system, it would be, I should think, very dangerous to assume that, when we find in an early Chinese author the name of a *sieu*, only the single star which the later astronomers know by that name can be meant, or even that the division of the heavens, where one is implied, is to be reckoned from star to star, and not, as in the other two systems, by simple proximity to the group named.

It deserves to be farther remarked, that the conversion of a series of groups into one of single stars used as determinatives or fundamental stars is vastly easier to explain than the reverse.* The former would naturally accompany the development of the Chinese astronomy into a more scientific form, and the introduction of new and more exact modes of observation. We should only have to suppose that the Chinese, after having for a time observed the movements of the moon and other planets by the eye alone or chiefly, and with reference to the asterismal groups, so far perfected their methods and appliances as to employ the meridian circle or its equivalent, with accompanying measurement of time; this would evidently throw out of use the old lunar zodiac, and might easily lead to the substitution of the modern limiting stars; which, in order to the least possible departure from ancient customs, were chosen out of the

* If, at the time of publication of the *Sûrya-Siddhânta*, I was inclined to a different opinion (see this *Journal*, vi. 349, or *Sûrya-Siddhânta*, p. 205), I have long since seen my error.

former and familiar groups. Such a change is closely analogous to what might have taken place also in India, if the Hindus had been willing to forget the old astrological significance of their *nakshatras*, or if the new device of the *yoga* or momentary conjunction had so recommended itself to them as to crowd out and replace the former superstition; the junction-stars might then have assumed the significance of the older groups, and the latter have been lost from use, and finally from remembrance.

It is, of course, impossible to restore with certainty the primitive form of the system of lunar asterisms. We may, however, make a tolerable approximation toward such a restoration by comparing together the three best known representatives of the system, and assuming that, wherever two of them agree and the third only is found to differ, the latter has varied from the original, which has been preserved unchanged by the two others. This assumption has an evident plausibility, although it can by no means be relied on as infallible: it could be proved in a great degree fallacious or unreliable only by showing that one of the three systems had been derived from another through the medium of the third; and this, in my view, is neither demonstrated nor plausibly to be presumed. I present upon the opposite page the results of a comparison of the kind suggested, adding a statement of the cases in which either system appears to have varied from the original norm, and also, in brackets, the member of each group selected by the Chinese as limiting star of a *sieu*, in their conversion of the series into a scheme of fundamental stars.

Only one member of the series, it will be noted, requires to be marked as wholly doubtful; namely, the fourth: with respect to this the three forms of the system are irreconcilably discordant, although in a manner which seems to indicate that the original locality of the asterism was probably in Orion. We cannot, indeed, but wonder at the original construction or present condition of the system as regards its third, fourth, and fifth members. In locating the third in the head of Orion, the constructors appear plainly to have neglected a group which was offered them as the natural and most eligible successor of the Hyades; namely, β and ζ Tauri, the tips of the Bull's horns: it is, in my view, the only case in which we have reason to find serious fault with their selection. And the neglect by the Chinese of the brilliant Twins, properly constituting the fifth asterism, with their substitution of a star which chances to be contained in the group to which the Arabs have apparently shifted their preceding, or fourth, asterism, is quite puzzling. The primitive place of the twenty-sixth member is also less confidently determinable than were to be wished. I cannot but conjecture, however, that the Hindus may have shifted their asterism (Revati) at this

point to the ecliptic at the time when they changed the commencement of the series from Kṛttikā to Aśvinī, and gave such an immense cosmical importance to the new initial-point of the sphere: they might well enough feel desirous to fix this grand starting-point to the sense by a star situated directly upon it or in its immediate vicinity.

Primitive and Modified Forms of the System of Lunar Asterisms.

Probable original constituents of the system.	Hindu variations.	Arab variations.	Chinese variations.
1. γ Tauri (Alcyone) etc. Pleiades. 2. α Tauri (Aldebaran) etc. Hyades. 3. λ, ϕ^1, ϕ^2 Orionis. Head of Orion. 4. 5. α, β Geminorum. Castor and Pollux. 6. γ, δ Cancri etc. Belly of Crab. 7. δ Hydræ etc. Head of Hydra. 8. α Leonis (Regulus) etc. Head and neck of Lion. 9. δ, θ Leonis. Rump of Lion. 10. β, θ^3 Leonis. Tail of Lion. 11. γ Corvi etc. The Crow. 12. α Virginis. Spica. 13. λ, χ, λ Virginis. Edge of Virgin's robe. 14. α, β Libræ. Claws of Scorpion. 15. β, δ, π Scorpionis. 16. σ, α, τ Scorpionis. Antares etc. 17. λ, ν Scorpionis etc. Tail of Scorpion. 18. δ Sagittarii etc. Bow of Sagittary. 19. σ Sagittarii etc. Left shoulder of Sagittary. 20. α, β Capricorni. Horn of Goat. 21. λ Aquarii etc. Left hand of Waterbearer. 22. β Aquarii etc. Left shoulder of do. 23. α Aquarii etc. Right arm of do. 24. α, β Pegasi. West side of Square in Pegasus. 25. γ Pegasi. α Andromedæ. East side of do. 26. ? Left arm and side of Andromeda? 27. β, γ Arietis. Right horn of Ram. 28. 35, 36, 41 Arietis. Musca.	4. α Orionis. 13. α Bootis. Arcturus. 20. α Lyræ (Vega) etc. 21. α, β, γ Aquilæ. 22. α Delphini etc. 23. λ Aquarii etc. 26. ζ Piscium etc.	4. η, μ Geminorum etc. 7. ξ Cancri, λ Leonis. 11. $\beta, \eta, \gamma, \delta, \epsilon$ Virginis. 19. Space near π Sagittarii. 26. β Andromedæ etc.	ϵ Tauri.] ι Tauri.] δ Orionis.] 4. δ Orionis. 5. μ Geminorum. ϵ Cancri.] θ Hydræ.] 8. α Hydræ. 9. ν^1 Hydræ. 10. α Crateris. ϵ Corvi.] λ Virginis.] ϵ Libræ.] ι Scorpionis.] ϵ Scorpionis.] ι Scorpionis.] ϵ Sagittarii.] ϵ Sagittarii.] ϵ Capricorni.] ι Aquarii.] ι Aquarii.] ϵ Aquarii.] ϵ Pegasi.] γ Pegasi.] 26. ζ Andromedæ. ϵ Arietis.] ϵ Arietis.]

The other Hindu variations—except the strange and problematical one to λ Aquarii, at the twenty-third station—are evidently made in order to bring in conspicuous constellations from the north, and they are the greatest violations which have anywhere been committed of the proper design and spirit of the system. The Arab *manāzil* show the fewest departures from the primitive form, and these are attempted improvements, inspired by the original governing idea, the selection of groups nearly bordering upon the ecliptic. The knotty and troublesome point of the third, fourth, and fifth members, the Arabs have dealt with more successfully than either of the other possessors of the series. Except at this point, the only Chinese variations consist in the transfer of the eighth, ninth, and tenth asterisms to a situation farther south—a transfer of which note has been taken, and a conjectural explanation offered, in an earlier paragraph.

We come now to consider more particularly the views of Prof. Weber. This distinguished scholar, not content with refusing belief to M. Biot's theory, that the Hindu *nakshatras* are an adaptation of the Chinese *sieu*, holds as demonstrable, and attempts to prove, that the *sieu*, along with the *manāzil* of the Arabs, are directly derived from the *nakshatras*—the other two peoples having separately imported from India, and applied to their own uses, with slight alterations, an institution of Hindu origin. While fully acknowledging the very great value of Prof. Weber's essays—a value which is in but a slight degree dependent upon their discussion of the question of origin; since, along with the criticism of the Chinese authorities, already referred to, they offer us an almost exhaustive collection of materials for the study of the aspects and applications of the Hindu system in the earliest period of its history: a service for which we cannot be too grateful—I yet am unable to agree with him respecting this particular point, or to admit the force and pertinence of the arguments upon which he founds his opinion. I shall accordingly proceed to set forth the grounds of my dissent.

The whole strength of Weber's position lies in this thesis: that the Hindu *nakshatra* system has been a greatly and variously changing one, passing through a series of diverse forms; and that the Chinese and Arab systems represent one of its latest developments. If this is not proved, nothing is proved, and Weber's reasonings leave the question of origin, as they found it, unsolved. But, far from regarding it as proved, I do not think that he has made out even a tolerable case in its favor.

In the first place, his whole discussion is underlaid, as has been already pointed out, by the assumption that the *nakshatras* have the same character and use which we see in the Chinese *sieu*: that is to say, that they are virtually single stars,

serving to mark out in the heavens and give name to intervals which are reckoned from one star to the next. If such an assumption be allowed, it can hardly be denied that the Indian system has undergone essential variations; variations the more strange, as they are to be found not only in different authorities, but even in different parts of the same authority. The *Sûrya-Siddhânta*, in its second chapter, gives to the twenty-seven *nakshatras* twenty-seven equal portions of the ecliptic; if these portions were taken from one group to the next, they imply a series of *nakshatras* very different from those whose junction-stars are so minutely defined by the same *Siddhânta* in its eighth chapter. So also, if Garga and Brahmagupta have chosen to assign only to fifteen *nakshatras* equal twenty-seventh portions of the circle, while to six they give a portion and a half, and to six only a half portion, they must have recognized a still different series, which no one has yet pointed out, or is likely ever to find. The same may be said of Varâha-mihira's definition of the mode of the moon's entrance into a *nakshatra*—that, in some cases, the apparent junction precedes the actual, or the reverse: whatever this may mean, it is obviously inconsistent with any division of which the boundaries should be determined, in the manner assumed by Weber, by the familiar constellations which we call the *nakshatras*. And yet, both Brahmagupta and Varâha-mihira define the positions of the junction-stars in the same manner as the *Sûrya-Siddhânta*, and use the same names for the different members of the two conflicting systems. It is almost superfluous, after this, to go back to the *Brâhmanas* for evidence to the same effect. When, in their mock-legendary narratives, they relate how king Soma (the moon)—much to his disgust, and after repeated attempts to avoid the disagreeable necessity, even by the breach of a promise solemnly given—has to pledge himself henceforth to dwell equally in succession with all his wives, the *nakshatras*, instead of passing his time, as hitherto, with his favorite Rohinî alone, we must conclude, according to Weber, that the stars limiting and dividing the asterisms were, in the view of the *Brâhmanas*, disposed at precisely equal distances along the ecliptic—if, indeed, we are not compelled to go farther, and maintain that they were arranged at intervals varying inversely as the moon's varying velocity in different parts of her revolution, with a provision annexed for gradual modification, as the revolution of the line of apsides, and other less constant causes, occasioned a shifting of the regions of her fastest and slowest motion: whereas originally she was stationary in Rohinî, or else this constellation extended all the way around the heavens. A hard time the Hindu star-gazers must have had of it, in truth, selecting so many different systems of stars, without help from the telescope, to fit all their discordant systems of

division, and keeping them in harmony with the ever-varying irregularities of the moon's motion. But the assumption of this mode of division has been shown above, as I believe, to be altogether baseless; to find support neither from the Hindu authorities, ancient or modern, nor from analogy, nor from *a priori* considerations: it is nothing but a misapprehension. If we take that view of the *nakshatra* system which regards it as a series of groups of stars, occupying or pointing out, instead of limiting and separating, the divided portions of the planetary path, all difficulties and inconsistencies disappear; we see clearly that groups somewhat unequally distributed do not imply an unequal division of the ecliptic, nor an equal division require the recognition of a series of stars at equal distances; and that it is possible for authorities who accept precisely the same stellar series to differ from one another in the details of the division to which it serves as basis.

This erroneous fundamental assumption being removed, with its necessary implication of a shifting and changing series of stars, nearly all the other evidences of alteration in the system, which Weber is able to adduce, are at once seen to be of a very trifling and inconclusive character. They are chiefly variations in the names of the *nakshatras*, differences as regards the divinities to whom they belong, differences respecting the number of stars composing the groups, and the like, found among the Hindu authorities, ancient and modern. But all such variations are, within certain limits, perfectly natural and allowable, and consistent with the maintenance of the integrity of the system; they may even come to be evidence of its unaltered identity, as in more than one instance I think they actually are. Varieties of name, surely, in a language so fertile of synonyms as is the Sanskrit, as well in its scientific as its literary vocabulary, are not to be taken as even *prima facie* evidence of varieties of character. If the *Sûrya-Siddhânta*, for instance, has a dozen names apiece for the sun and moon, we need not thereby be made doubtful whether the same two luminaries were really intended by them all. Nor need we in the case of the *nakshatras*, unless some other ground of probability of variation is made out, or unless the varying names are so characteristic, and point so distinctly to different stars or groups, that the conclusion of their diverse application is forced upon us. I cannot see that this is so in a single instance, nor does Weber make the claim, or endeavor to show that any given name could be better explained by referring it to a constellation not comprised in the series. Differences in the divinities selected as regents of the groups are of even less consequence. It is undeniable that in the *Brâhmaṇas* we approach pretty near to the beginnings, whether by origination or importation, of the *nakshatra* system in India;

and as no particular reason can be made out for the selection of one deity rather than another as lord of a particular asterism, we may with every reason suppose that for a considerable time, at least, more or less discordance in the choice would be found.

Differences in the number of stars regarded as composing an asterism would be of more telling weight, if they were such as could not be readily explained by the character and surroundings of the group with which the asterism is identified. But, in almost every case, they are, I believe, so explainable, and were duly noticed and accounted for in the detailed discussion of the identification of the groups which we gave in the notes to the *Sûrya-Siddhânta*. Thus, for instance, if the *Kṛttikâs*, the Pleiads, are reckoned now as six and now as seven, the variation should cause us no difficulty, considering the uncertainty which other nations besides the Hindus have felt upon the same point. The Greeks acknowledged seven Pleiads, counting in a lost sister; and to the Germans the constellation is still *das Siebengestirn*, 'the seven-stars.' Whether a seventh member of the group was actually once visible, and has now faded from view by that slow process of change which is known to have affected the brilliancy of certain stars, or whether the number seven was always the result of a mis-count, induced by the fancy for a mystic, instead of a simple number, is a question of very little significance. Nor need we be embarrassed by statements in Hindu legends to the effect that the *Kṛttikâs* have their permanent station in the east, or that they formerly accompanied the brilliant stars in the Great Bear: such statements, it is evident, are pure creations of fancy; from any astronomical point of view, they are simply nonsense. That the brilliant star *Rohiṇī*, or *Aldebaran*, was now taken by itself to form the asterism, and now along with the other members of the group of which it is the chief ornament, is very natural, and is no reason for inferring a change in the position of the asterism. That ζ *Hydræ* was sometimes added to the little group of five stars constituting the asterism *Āçleshâ*, and ζ or ϵ *Delphini* to the four *Çravishthâs*, is not less easy to believe. That, of the extensive constellation forming the tail of the Scorpion, now only the brilliant pair in the sting were made to compose the asterism *Mûla*, and now more or fewer of the others were included with them, is readily supposable, and does not render the identity of the asterism suspicious. And so with the few other like cases of variation which the system presents.

I should not always be willing to admit the force of the evidence on which Weber relies to prove a variation in the number of stars composing an asterism: in certain cases, namely, where it depends upon the grammatical number of the name of the asterism, and on variations therein. If a group has a plural

name, indeed, it must, unless some good reason to the contrary can be shown, be regarded as composed of more than two stars; but this namé may vary to singular, without by any means implying a reduction of the group to a single star: only its contemplation as a single group, as an individual member of the series of asterisms, or as one of the moon's consorts, may be implied. In this manner the Kṛttikâs may become Kṛttikâ, the Maghâs may become Maghâ, and so on. A dual name, again, is even more distinctly indicative of a pair of stars; and, as we should expect, wherever the nomenclature of the system presents us a dual name, there we find in the heavens a conspicuous pair to which to attach it: we have, for Aṣvayujâu, β and γ Arietis; for Punarvasû, α and β Geminorum; for Viçâkhe, α and β Libræ; for Viçtât, λ and ν Scorpionis. These, too, may vary to singulars in the same manner as the plurals do, and we may find Punarvasu, Viçâkhâ, etc.; or they may even become plurals in consequence of an extension of the group by the inclusion of other neighboring stars. Another variation between dual and plural, or between dual, plural, and singular, has a different ground: it occurs in cases where a single group, having a collective name, is divided into two asterisms. Thus, the two asterisms in the rump and tail of the Lion form a single quadrate constellation, and are called *phalgunyas*, or *arjunyas*, 'the shimmering or glowing ones;' but, as two members of the *nakshatra* system, they are also made dual, *phalgunyâu*, 'the two Phalgunîs,' precisely as other plurals have been shown to be converted to singulars; and each of the two also becomes by itself dual, as being composed of a pair of stars. A similar case is that of the asterisms which together compose the conspicuous group known as the Square in Pegasus: their usual titles, *proshthapadâs* and *bhâdrapadâs* or *bhâthrapadâs*, contain the element *pada*, 'foot,' and the allusion conveyed in these names to the disposition of the stars in the constellation, like the four feet of an animal or of an article of furniture, is so marked and unequivocal that only extreme prepossession could induce any one to overlook it. Another rare appellation of the double group, the singular *pratishthâna*, 'stand, support,' is as plainly due to a like conception of its form. Both these names farther appear as dual, and even as double dual, for the same reason for which the name *phalgunî* was so treated. But the conclusion, in the third place, from a singular name that an asterism contains only a single star is vastly more doubtful, and even, in my view, palpably ungrounded, since such a title may from the beginning have designated the group as a group. Thus the name Mṛgaçiras, 'deer's head,' has nothing to say respecting the number of stars of which it may be the collective designation; while Hasta, 'hand,' may with evident probability be regarded

as pointing out the very group of five stars to which we find it attached by the astronomical text-books. The adjective *ekanakshatra*, applied to some of the asterisms, obviously designates them, not as 'single-star *nakshatras*,' but as 'singular-name *nakshatras*;' just as *purnnakshatra* does not mean 'male *nakshatra*,' but 'masculine-name *nakshatra*.' another and yet more singular instance of the weight attributed to petty peculiarities in the names of the groups is to be found in the division of them referred to by Weber (see note 2 on p. 311 of the first essay) as founded on the number of syllables in their respective titles.

The final conclusion, then, at which Weber arrives, that there are but four of the *nakshatras* with regard to the number of stars composing which there is an utter absence of discordance among the different authorities, although it looks quite startling, has in fact only an illusory force, since it is founded on and represents differences which are in part imaginary, and in part trivial. There are but one or two of this whole class of variations which need cause doubt or difficulty to any one: it seems strange, namely, that a single star out of so faint a group as that composing Pushya (γ , δ , ψ Cancri), should have been by any authority regarded as alone constituting the asterism: it is also hard to see why the name of the asterism *Ârdrâ* (α Orionis) should by one or two authorities be given in the plural, and why its synonym *bâhu*, 'arm,' is once made dual, as if a group of two or more stars were intended to be pointed out. But, even in these cases, the sum of evidence and of probability in favor of the unchanged identity of the asterism is so strong that our faith in it need not be seriously shaken.

In more than one instance, if I do not misjudge, Weber's anterior persuasion of the shifting character of the *nakshatra* series, and his inclination to interpret everything in a manner favoring it, have misled him into very farfetched and unnatural hypotheses, to the neglect of such explanations as lay close at hand and possessed an evident plausibility. Let us note two or three examples. The brilliant star of the first magnitude in the head of Taurus, called by us Aldebaran, constitutes a member of the system of asterisms, either alone or with the other members of the group of Hyades: its name is *Rohinî*, which means literally 'red, ruddy.' As the star in question is one of the few which shine with a conspicuously reddish light, the supposition naturally suggests itself that this characteristic determined the appellation of the *nakshatra*, and that the appellation and the answering characteristic constitute together an important evidence of the unchanged identity of the asterism from the first institution of the system. Nothing of this, however, appears to Weber; he mentions, indeed, the possible interpretation of *rohinî* as 'red,' but does not allude to any natural reason for its

application to the *nakshatra*. At another point in the series occurs another brilliant red star, our Antares, or Cor Scorpionis. This usually has the name Jyeshthâ, 'eldest,' but in two of the most ancient authorities it also is styled Rohinî, 'the ruddy.' Here, again, we can hardly avoid concluding, one would think, that this second asterism is called "the red" for the same reason as the former one, and we may even accept the synonym as a welcome confirmation of the persistency of the asterism. Yet Weber apparently is not satisfied with an explanation so simple. He, on his part, takes note of the fact that the two stars in question are one hundred and eighty degrees apart—as they actually happen to be, very nearly—and that the former of them is in the Hindu traditions regarded as the special favorite of the moon; and upon these facts he proceeds to found a conjecture (which he then, in the next sentence, gives up again, as too utterly implausible), that the reason why the moon once particularly loved Rohinî was that the latter coincided with the vernal equinox (which would have been the case more than thirty centuries before Christ), and that the other Rohinî was so called because, at the same period, it occupied the other equinox, and so headed the second half of the *nakshatras*, as the former Rohinî the first half! Does not this seem like a wilful closing of the eyes to a reason which lies near at hand, in order to make a long journey for the purpose of catching at one which must be immediately relinquished as worthless? But Weber offers us another instance, not less striking, of the same kind, in connection with this very asterism Rohinî. It so happens that the word *rohinî* is also the name of the female of a species of red-deer. The Hindus, moreover, figured to themselves the neighboring constellation Orion as a stag or antelope; this appears partly from the fact that the little group of three stars in Orion's head is called *mrgaçiras*, 'the antelope's head;' partly, that his left shoulder (α Orionis) is sometimes styled, in the synonymy of the asterisms, *bâhu*, 'arm,' i. e., 'fore-leg;' and partly from the tradition which I shall presently relate. The somewhat remoter Sirius is also named in the astronomical text-books *mṛgavyâdha*, 'the deer-slayer.' Whether, now, the establishment of this whole series of related constellations with related titles grew out of the circumstance that *rohinî* was capable of being translated 'female red-deer,' along with the later-observed adaptedness of the stars composing Orion's figure to bear their part in the combination; or whether, as seems more probable, the recognition and naming of the "stag" was an independent fact, and its vicinity to the "red-deer" merely accidental, and perhaps even the occasion of the interpretation of the latter's name in that sense—is a question of trifling importance: the situation and connection of the three groups is at least meas-

urably assured by their relation to each other, and is rendered altogether unquestionable by an absurd story which the Hindus have founded upon it, and which Weber cites in different forms, from more than one of the Brâhmanas. Prajâpati, 'the lord of created beings' (an unfortunate divinity, often called upon to play a part in these artificial legends, in the manufacture of which, to order and in batches, the Hindus of the Brâhmana period were so apt), it is said, fell in love with his own daughter Rohinî; she becoming a female deer, he pursued her in the form of a stag, and was only deterred from his incestuous chase by being shot in the back with an arrow by the appointed agent of the indignant gods. There is the whole story illustrated in the sky: the innocent and lovely Rohinî (Aldebaran); the infamous Prajâpati (Orion) in full career after her, but laid sprawling by the "three-jointed arrow" (the belt of Orion), which, shot from the hand of the near avenger (Sirius), is even now to be seen sticking in his body. With this tale coming down to us from the first period of the *nakshatras* in India, who could suppose that, when we have to locate a member of the system called *mrgaçiras*, 'the stag's head,' and have just this part of the sky to locate it in, there could be an instant's hesitation as to its position, or the least doubt of its persistent identity, from the earliest times to the latest? Yet Weber does not see it so: in his view, there is nothing which at all fixes the name *mrgaçiras* to any particular constellation, nothing to prevent us from supposing that it was applied successively to various constellations, as one and another was selected for a boundary-mark in the ever varying divisions of the ecliptic: if the earliest authority giving the numbers of the groups assigns three stars to *Mrgaçiras*, this, he thinks, is a mere inference from the name; a stag's head, with a horn on each side of it, naturally suggested the number three;* and if we find it in the most modern form of the system an actual and indubitable group of three stars, this, we must suppose, is mere chance; the good luck of those under whose hands the system received its latest development enabled them to realize in the heavens the etymological fancy of their remote predecessors! A similar suggestion is thrown out in regard to Çravaṇa. If this is reckoned as a group of three stars, it is not because in early times, as in later, the name really belonged to the conspicuous constellation of the Eagle, a star of the first magnitude with a smaller one above and another below, but because *çravaṇa* means 'ear,' and so led one to think of a pair of ears, with a head between them! Of this implausible, not to say impossible and absurd, character are the suppositions which we are called on to

* "Bei *mrgaçiras*, 'Rehkopf,' dachte man sich wohl der Hörner wegen die Dreizahl nöthig." p. 381.

make in support of Weber's theory respecting the shifting and changing character of the *nakshatra* system.

At two points, however, Weber is able to bring forward what seems to him direct and positive evidence of a different position of the stellar groups composing *nakshatras* from that which is assigned them in the *Siddhântas*. In the first place, Abhijit, the problematical twenty-second member of the series of twenty-eight asterisms, is in the *Tâttirîya Brâhmaṇa*, the earliest authority which mentions it, described as situated "above the *Ashâdhâs*, below *Çronâ*" (*upariśtād aśhâdhânâm, avastâc chroṇā*; T. Br. I. v. 2. 3); and this is regarded by Weber as equivalent to assigning the group a place somewhere in Aquila, instead of Lyra. But I see no necessity for understanding the language of the *Brâhmaṇa* to define the stellar position of the group; I would consider it rather as fixing the order of the asterism in the series: Abhijit is, in the succession of the *nakshatras*, next above or beyond the *Ashâdhâs*, and next below or this side of *Çronâ* (*Çravaṇa*). This interpretation is, in every aspect, quite as admissible as the other, and the citation from the *Brâhmaṇa* is hence without avail to show a change of place since its time in the asterism Abhijit. The other case is of a less disputable character. The same authority, the *Tâttirîya Brâhmaṇa*, in a passage immediately preceding the one already quoted, constructs a stellar *prajāpati*, giving him Citrâ (ϵ Virginis) for head, Hasta (Corvus) for hand, the Viçâkhe (α and β Libræ) for thighs, and the Anurâdhâs (β , δ , and π Scorpionis) for standing-place; while Nisityâ (i. e. Svâti) is declared to be his heart. This would make a very tolerable figure, as constellational figures go, but for the heart, which, if Nisityâ must be sought in Arcturus, lies some thirty degrees north of its proper place; while, on the other hand, if it can be assigned the position given to the corresponding asterism in the Arab and Chinese systems (ι , κ , and λ Virginis), the difficulty is wholly removed. Hence Weber claims it as altogether probable that, in the time of the *Brâhmaṇa*, or to the apprehension of its authors, the asterism next succeeding Citrâ was still situated close upon the ecliptic, like the corresponding *manzil* and *sieu*; and the force of the argument and the legitimacy of the conclusion cannot be denied. Absolutely certain we could not venture to call it, since it is not quite inconceivable that the constructor of the figure may have been careless of the position of the heart, when all the other parts fitted so tolerably, or may have been more mindful of the order of Svâti, between Citrâ and Viçâkhe, than of the position of the stars constituting the asterism.

The preceding discussion has shown us that (setting aside the expansion of the system from twenty-seven to twenty-eight members, or its reduction from twenty-eight to twenty-seven, of

which I shall presently speak) all the evidences marshalled by Weber to attest the variable character of the *nakshatra* series prove only this: that a single member of it must have had formerly in India the same position which we find it always to have had in Arabia and China. How untoward a result this is of an argument intended to demonstrate that the *mandzil* and *sieu* must have been derived from the *nakshatras*, as representing one of the latest phases of that variable system, does not require to be pointed out. We have seen reason above, upon a simple comparison of the three series of asterisms with one another, to infer that the Hindus must probably have altered theirs, since its origination or importation, in at least six members; which is far more than is established with the slightest shadow of plausibility by all Weber's doubts and questionings. Even this degree of alteration, affecting more than one fifth of the whole number of the *nakshatras*, does not by any means destroy or seriously impair their character as a fixed and stable system, or give them that Protean aspect which Weber would claim for them. I cannot but think that his view of what is required to constitute a system such as we see represented by the *nakshatras*, the *mandzil*, and the *sieu*, is fundamentally erroneous. He appears to suppose that a recognition of the fact that the moon makes the circuit of the heavens in twenty-seven or twenty-eight days, and that therefore her path is divisible into the same number of parts or stations, is itself the system, or the essential part of it, while its fixation in the sky, by selected stars or groups of stars, is a matter of secondary consequence. To my apprehension, on the contrary, this recognition is only the necessary preliminary to the establishment of a system. There is no such thing as a system of *nakshatras* until the series of stellar groups is determined upon, as guides to the actual division and nomenclature of the path of the planets; and its existence is bound to these groups, so that those who use and value it will not readily forget them, or hold them subject to arbitrary and sweeping alteration. It may be modified in one and another point, and even to no inconsiderable extent, but by gradual and successive changes, such as leave its identity and virtual integrity each time unimpaired. I have seen no evidence, in Weber's essays or elsewhere, which was of any avail to prove that the Hindu *nakshatras* did not possess this character; the name *nakshatra* itself, with its synonyms, which all mean without exception 'star, constellation, asterism,' is sufficient to show that the stellar groups were its central and prominent feature. Were we dealing with the Arab or Chinese systems, in both of which the name signifies 'mansions, stopping-places, stations,' there would be more plausibility in regarding the division as the primary matter, and the identity of the determinant groups as of subordinate con-

sequence: although even here the view would be fallacious, since the divisions possess no recognized existence until they are determined by the groups: but a system of *nakshatras* is one of "asterisms," its members are stellar individualities, and it can have no stability or value if these are changeable at will. It is not necessary for me to set forth here in any express and detailed manner the positive evidence, showing the fixedness and permanency of the stellar groups composing the *nakshatras*, which is derivable from the accounts of the system given by earlier and later Hindu authorities: some of this evidence has already been presented incidentally; and, in view of the utter failure of the only attempt yet made to show the reverse, and the absence of any important opposing considerations, documentary or theoretical, it may be taken for granted, and the burden of proof thrown upon any one by whom it is denied. I will merely say that, in my opinion, the whole nomenclature of the system, the notices respecting the numbers and relations of the stars of its groups, the related legends, and the like, do in every case (excepting that of Svâti, mentioned above), and from the beginning, so far as they are distinctive at all, point to the same series of asterisms which we derive, with all the certainty and authority which a definition by astronomical coördinates confers, from the latest astronomical treatises.

There remains for examination a single point, more pregnant with import than any hitherto discussed, in its bearing on the question of change in the Hindu system, and the derivation from it of the other two. It is the number of constituent members of the *nakshatra* series: the question of the relation between the numbers twenty-seven and twenty-eight, both which are to be met with in Hindu authorities, ancient and modern. Weber holds that the groups were originally twenty-seven, and became twenty-eight at a later period, by the addition of Abhijit. If this be fully and satisfactorily proved, the Hindu origin of the Arab and Chinese systems will be hard to deny; since it must appear at least highly improbable—to call it altogether impossible I should hardly venture—that the Arabs and Chinese should on their part also, and independently, have expanded to twenty-eight an original series of twenty-seven. I have purposely reserved until now any mention or consideration of this point, in order that I might first remove all other supports from Weber's thesis, and show that, if we are to pronounce the Hindu system the parent of the others for the reason that they represent a later phase of its development, our decision must be based solely and alone upon the ground of the change of number. We shall hence be led to require that the evidence of the change be very clear and unambiguous; for a less degree of force and cogency will be tolerated in a reason which comes

in as a cumulative addition at the end of a series of probable proofs, than will content us in an argument on which must repose the whole weight of an important conclusion. In my view, the argument is in this case too insecurely founded to sustain so heavy a burden; the evidence of the priority of the system of twenty-seven members is not sufficiently unequivocal for the purpose to which it is applied. If we found this system, with the twenty-seven-fold division of the ecliptic and all the other dependent features, uniformly and alone presented in the authorities preceding a certain date, and if we found later the system of twenty-eight, serving as foundation to a twenty-eight-fold division of the ecliptic, and to the other uses of such a system, crowding its predecessor out of use and usurping its place, then would the matter be a tolerably clear one: it could fairly be claimed that the Hindus first possessed a series of twenty-seven *nakshatras*, to which they afterwards added a twenty-eighth, and that the other nations borrowed it of them after this extension. But the case stands not so. It is true that in the earlier authorities the decidedly prevailing number is twenty-seven; but this is equally true also of the later authorities: down to the final fixation of the Hindu astronomy in its scientific form under Western influence, the *nakshatras*, for all the practical purposes of a series of asterisms determining portions of the ecliptic, are and remain only twenty-seven. The *Sūrya-Siddhānta* knows nothing of any division of the planetary path into twenty-eight parts, nor, according to its authority, could the moon or any other planet ever be present in the *nakshatra* Abhijit; they may all, indeed, enter into *yoga* or momentary conjunction with Abhijit; but so they may with one another, and with sundry of the fixed stars which never pretended to claim a right to be regarded as *nakshatras*. No one, so far as I know, has brought forward evidence to show that any Hindu authority has divided the "circle of the asterisms" into twenty-eight equal arcs, thus giving the larger system the same form and application as the smaller one. But, side by side with the recognition of twenty-seven asterisms as determining divisions of the ecliptic, sometimes in the same authority, sometimes in other authorities of the same period and character, is found a recognition of twenty-eight star-groups, as constituting, under certain aspects and for certain purposes, the complete series. So far as I can see, there is no time in the history of the system in India, at which any other nation borrowing it from the Hindus would not have been quite as likely, or more so, to receive it with twenty-seven constellations, as with twenty-eight. Let us next see how the case stands as to priority of mention. The twenty-seven are, as is shown by Weber, first spoken of in the *Tāittirīya Saṁhitā*: the twenty-eight make their first appearance

in the Tâitirîya Brâhmaṇa and in the nineteenth book of the Atharva-Veda.* That the former mention is probably the earliest of the three, no one will be disposed to deny; but he will be a bold man who ventures to assert that it must be very much earlier than the others. There is confessedly no such difference of period between the Sanhitâ and Brâhmaṇa of the Black Yajus as between those of the Rig-Veda. In both divisions of the former, as was long ago pointed out, by Weber and others, there is a complete intermingling of the two classes of material known as *mantra* and *brâhmaṇa*, and the Brâhmaṇa is the immediate continuation and complement of the Sanhitâ. All mention of the *nakshatras* which is made in either work is in parts of the text which would be ranked as *brâhmaṇa*, and which, if upon the whole of later origin in the Brâhmaṇa than in the Sanhitâ, yet all belong to the same period, and need not be separated by any considerable interval of time. Considering how the traditionary materials were gathered up and combined in the later Vedic age, it is by no means impossible that the Atharvan hymn should be as ancient as anything which mentions the complete series of asterisms.* The argument of prior mention, then, amounts merely to this: that, of the not numerous specifications of the number of members composing the *nakshatra* system which are to be found in the literature of the Brâhmaṇa period, the greater part, and among these the one or two which are presumably the most ancient, speak of twenty-seven only. Very nearly the same thing, as it happens, could be said of the more modern astronomical literature; the Jyotisha, which is confessedly more ancient than the works of the Siddhânta class, mentions only twenty-seven asterisms; and, if the yet earlier literature were swept away, we might draw the probable conclusion that the system was expanded from twenty-seven to twenty-eight after the time of the Jyotisha and before that of the Siddhântas: a conclusion which would be not a little fortified by the circumstance that an awkward attempt has been made to crowd Abhijit into the Jyotisha also, as if authority were sought for a later addition by its intrusion into a work whose existence preceded its own origin; while, as the

* Weber finds in its nomenclature evidences of a later origin, but they seem to me far from unequivocal. The form *grand* for *gravana* was very probably, as the metre shows, the original reading of the text, and that *mûlabarhantî*, *jyeshthaghantî* are earlier names than *mûla* and *jyeshthâ* is what I am very unwilling to believe: they seem to me, rather, titles of reproach, manufactured out of the usual and proper appellations (Weber himself, with much plausibility, explains in a like manner the name *aghâs*, for *Maghâs*, in Rig-Veda x. 85. 15), and applied to these two asterisms in view of the unlucky astrological character which men had come to ascribe to them. No such stigmas are affixed elsewhere in the series, nor can we plausibly suppose the astrological element to have been predominant, or prominent, at the first invention or introduction of the *nakshatra* system.

case stands, we know that Abhijit as a *nakshatra* is much older than the Jyotisha, and was omitted from it only as it is also omitted from the second chapter of the *Sûrya-Siddhânta*—because it had no concern with the equable division of the ecliptic into portions. I am far from claiming that there is anything in the Hindu authorities which makes directly against the theory of the originality of the series of twenty-seven groups in India, and its later expansion into one of twenty-eight; on the contrary, I freely acknowledge that, upon Indian ground alone, that theory is rather more probable than the opposite; but I do contend, and with much confidence, that it is not forced upon us by the facts, and does not, to the exclusion of any other, furnish their only acceptable explanation. There is no insuperable, or even formidable, obstacle in the way of our supposing that, if the Hindus received the institution from abroad, they received it as a series of twenty-eight groups, but soon, for reasons of their own, reduced it to twenty-seven members; while yet the remembrance of the other form was never entirely effaced, and the rejected asterism appeared, to the last, in certain aspects and applications of the system; so that while, as a foundation for the division of the ecliptic, it always maintained, from the time of the first re-formation, its twenty-seven-fold character, it nevertheless, in what concerned the asterisms as groups of stars simply, was sometimes regarded as still possessing its twenty-eighth member. We are fully justified in setting aside as indecisive the argument from change of numbers, in refusing to believe, on this ground solely, that the *manâzil* and the *sieu* are derivative forms of the *nakshatras*, and in inquiring farther whether the question of origin is to be determined, in preference, by other considerations.

I would here remark that the nearer coincidence of the moon's revolution with twenty-seven days than with twenty-eight does not seem to afford reason for concluding that the former number must have been earlier and more original than the latter, as belonging to the constellations selected to compose the lunar zodiac. So long as there was a fractional part of a day, more than twenty-seven and less than twenty-eight, entailing a discordance in the relations of the stellar groups to the moon's place in any two successive revolutions, it would be comparatively an indifferent matter whether the odd third of a day were disregarded altogether, or made to count as a whole member, notwithstanding its brevity. The choice would be likely to be determined by the character of the number which it afforded, as being conveniently divisible, as having attractive associations and suggestions, or the like. If eleven and one third synodical revolutions of the moon made up the period of the earth's revolution around the sun, instead of twelve and one third, as is

actually the case, the year would doubtless none the less be reckoned as composed of twelve months, because of the arithmetical character of the number twelve, as divisible by two, three, four, and six, while eleven is a peculiarly impracticable number. As regards twenty-eight and twenty-seven, each has its advantages. The one is divisible by two and four, and in the latter case with the quotient seven; hence it would recommend itself to a people who made much of the number seven, and who had the week. On the other hand, one may conceive that the Hindus, knowing no such division of time as the week, and less regardful of the mystic significance of the number seven than their Semitic neighbors, should have been led to amend to twenty-seven, a number which had the recommendation of being a cube, by the practical consideration that the error was less if not twenty-eight, but twenty-seven stations were counted in the moon's revolution.

If the views of the earliest form of the system of lunar asterisms and its changes which have been set forth in an earlier part of this paper were well founded, we may find in them some slight confirmation of the originality of the number twenty-eight, and a facilitation of the Hindu reduction to twenty-seven. In the line of groups which stretches between the nineteenth and twenty-fourth members of the series (according to the ancient numbering), or between the Hindu double asterisms Ashâdhlâs and Bhâdrapadâs, in nearly uniform distribution and with nearly equal brilliancy, we are at a loss to know which should have been left out in an original system of twenty-seven asterisms; all seem to possess an equal right to a place. When, however, the Hindus had substituted for the first three of these the more conspicuous but remoter constellations of the Dolphin, the Eagle, and the Lyre, the last of them situated more than sixty degrees from the ecliptic, it would seem very easy, if the slightest desire for a reduction to twenty-seven members were felt, to leave out altogether a group which, by its position, had so little claim or fitness to point out and give name to a portion of the planetary path. I lay no stress on these considerations, but merely deem them worthy of a brief mention.

The results thus far won are of a negative character only. We have seen, on the one hand, that M. Biot's argument for the originality and immense antiquity of the Chinese *sieu*, and for their communication from China to the countries lying farther westward, is entirely nugatory; we have seen, on the other hand, that Prof. Weber's attempt to prove that the Hindu system is the parent, and the others its descendants, is not less a failure. The question of actual origin is still untouched. We have only cleared the ground; we have left the way open to prove, by good and sufficient evidence, that either one of the

three nations referred to, or that some fourth people, different from them all, is entitled to the honor of being regarded as the inventor of an institution so widely diffused, and forming a cardinal element in the astronomical science of the most important and highly cultivated races of Asia. Into this general inquiry I do not propose to enter with any thoroughness; I only wish to ask here what reason there is to believe, or to suspect, that India is not the original home of the asterismal system. In entertaining a distrust of her right to this distinction, I am glad to find myself in accord with Prof. Weber; since, however, the grounds upon which I base my distrust are not in all respects the same with his, I will first state and examine those which he brings forward.

A principal reason why Weber disbelieves the originality of the system of *nakshatras* is that no traces of it are to be found in India in the Vedic period proper, the period of the early hymns of the Rig-Veda. He would not, of course, urge this as a conclusive argument, since he would acknowledge that there was time enough between the period of the Vedic hymns and that of the Brâhmanas for such an institution to grow up, and darkness enough resting upon the interval to admit of its growing unobserved, until the system makes its appearance, complete and fully developed. And these considerations seem to me so greatly to limit the force of the argument as to forbid that any stress whatever be laid upon it: I should not feel in any appreciable degree less willing to admit the independent Indian origin of the *nakshatras*, on account of their non-appearance until the second period of recorded Indian history. There are passages in the later portions of the Vedic hymn-texts which furnish hints enough of a contemplation of relations between the moon and the *nakshatras* (that word being not yet used in its later and technical sense) on which to build the later development of the system, should other evidence favor such a construction of its history.

Weber adds three circumstances which appear to him to furnish ground for believing that Western Asia actually possessed a system of lunar asterisms or mansions of its own, which it must then have communicated to India. In the first place, a Mohammedan work, the Fihrist of Ennedim, of the tenth century after Christ, informs us that the Harranites had a custom of visiting their temples, sacrificing to the moon, eating and drinking, and performing other such ceremonies, on the twenty-seventh or twenty-eighth day of the month; of fasting twenty-seven days in honor of the lunar month; and so on. This, we are to believe, can only mean that the Harranites intended to celebrate the day on which the moon accomplished her sidereal revolution; and, since she revolves by moving forward so

many degrees a day, from star to star, they must have recognized a series of lunar stations; and hence, they must have possessed the system of lunar asterisms! This argument is beyond all question the weakest point in Weber's whole essay, and of somewhat the same character with M. Biot's conversion of the Chinese encyclopedist's innocent parallel of the Chinese and Hindu asterisms into positive documentary proof of the derivation of the latter from the former. The festivals of the Harranites were very probably connected with the moon's periodical revolution, but how this implies their acceptance of a series of star-groups, selected to mark her daily progress along the ecliptic, it is impossible to see. If every nation which has observed the very obvious and elementary fact that the moon makes the round of the heavens in twenty-seven to twenty-eight days must be declared a partner in the system of lunar asterisms, how is our modern European astronomical science to escape? Why not with the same reason assume that every nation which made the year consist of twelve months had the signs of the zodiac, Aries, Taurus, Gemini, and the rest? And finally, supposing the Harranites even to be proved in possession of the asterismal system a number of centuries after Christ, why, on Weber's ground, should it not have come from the same source to them as to the nations about them? If the Hindu *nakshatras* could penetrate Asia from the Chinese Sea to the Arabian Gulf, as Weber supposes them to have done, they certainly might also reach the land of Harran.

The second ground on which Weber holds to the ultimate origin of the asterismal system in Western Asia, is that upon which he mainly based his earlier rejection of Biot's views: namely, that the word *mazzaloth* or *mazzaroth*, the apparent Hebrew equivalent of the Arabic *manzil*, occurs twice in the Bible, in Job (38. 32) and in 2 Kings (23. 5). This is more to the point, and may be a genuine and valuable evidence of the fact as claimed, but it is also clearly too faint and dubious to be relied upon with any confidence. The connection of the words *mazzaloth* and *manzil*, and the identity of the ideas which they represent, rather needs itself to be established by evidence derived from other quarters, than is capable of being employed to support a doubtful and controverted thesis.

Weber's third ground is the fact that the *manâzil* are spoken of in the Koran; in a general way, indeed, yet so as to show that they were well known and acknowledged, and held in high esteem. But, if we adopt Weber's views in other respects, this also appears to be of little or no account. He acknowledges the existence of the complete system of *sieu* in China as early as 250 B. C., yet thinks it only an offshoot of the Hindu *nakshatra* series. I ask again, then: if the Hindu system was so peri

patetic in its character as to have made its way at that early date to remote China, why may it not have reached Arabia also in season to win there all the currency and authority which the Koran implies it to possess?

Finally, in the second part of his essay, Weber refers to the measure of the respective length of the day and night, when the sun is at either solstice, as laid down in the *Jyotisha*, and points out its inapplicability to any portion of India excepting its extreme north-western corner, while at the same time he indicates its near agreement with the actual fact at Babylon. In an additional note at the end of his whole work, he shows that the same measure, as nearly as possible, is given also by the Chinese writers. From this striking coincidence he draws, with considerable confidence, the conclusion that the datum must be one which has passed from Babylon into the possession of the other two peoples: and the farther inference would naturally be that both India and China must have received other astronomical truths and methods from the same quarter—among them, very possibly, the system of lunar asterisms. But there are serious drawbacks to the cogency of this conclusion and its corollaries. The latitude of Babylon and of that part of China in which were situated its ancient capitals and centres of civilization is so nearly the same, that independent observation of the respective length of the longest and shortest day would necessarily lead to nearly the same result in both countries. And the form of statement of the Chinese authorities is so vague and general as fully to cover any minor variation which we might otherwise have looked for. They say, in effect, that in midsummer the day is three fifths and the night two fifths, and that in midwinter the night is three fifths and the day two fifths, of the whole twenty-four hours, the *nycthemeron*.* That the Chinese had not the means and the skill, at a very early period in their history, to measure with at least this degree of accuracy the relative length of the day and night, could hardly be affirmed with any plausibility: and I should not therefore regard as a fact of any significance the correspondence of the Chinese

* Their form of statement is, more precisely, that at the winter solstice the day is forty *khe* and the night sixty *khe*, and at the summer solstice the reverse; a *khe* being the hundredth part of a *nycthemeron*: but this really gives no more precision to the definition than I have described it above as possessing; or, at any rate, the utmost that could be claimed in behalf of it would be that it was made by tenths instead of fifths. That Biot should take the trouble to calculate the precise latitude, down even to seconds, and with allowance for the variation in the obliquity of the ecliptic, for the place where so rough an observation was made, is an actual marvel of uncritical and useless exactness. One might as well endeavor to fix the precise day and hour on which an author recorded his declaration that a certain eclipse happened "a hundred years ago," by rigorously determining, in the most scientific manner, the exact moment of the eclipse itself.

reckoning with that which is inferrible for Babylon. Nor does such an item of knowledge appear likely to pass from the hands of one nation to those of another, considering the evident variability, and dependence on local circumstances, of the length of the day. There is more reason to suspect a derivation from some foreign source in the case of the Hindu datum, since Central India lies so far to the southward of Babylon that, even as the result of a rough determination, stated without attempt at precision, we should look for a considerable difference in the numbers given. Thus, at about the parallel of twenty-five degrees, or nearly in the latitude of Benares and the great cities on and near the Ganges, we should expect the greatest variation of the day to be stated at four *muhûrtas*, instead of six, or at less than a seventh of the whole day and night, instead of a fifth, as the *Jyotisha* gives it. Whether the assumption of a somewhat more northern place of observation within the limits of India proper, and a consideration of the inaccuracy of Hindu instruments and observers, would or would not sufficiently account for the character of the datum, allowing us to regard it as of native origin, I would not attempt to decide with authority: but I should not dare to rely upon it as any valuable evidence of astronomical communication from Babylon. Were the Hindu and Chinese measurements given with considerably greater exactness, down to minute parts of a *muhûrta* and a *khe*, and did they then agree closely with one another and with what the latitude of Babylon demanded, there would be ground for a probable argument; but such coarse data as are actually furnished us are next to worthless for use in the discussion of difficult and controverted points.

In Prof. Weber's arguments intended to prove or to render plausible the derivation of the *nakshatras* from Western Asia, we are thus able to find but little of which we can acknowledge the cogency. The form in which he holds the theory of the non-originality of the Hindu system is one that will commend itself, I am confident, to the acceptance of but few other scholars. He is not afraid to combine with the belief that all the other known forms of the asterismal system derive themselves from the Hindu alone. But, if this be admitted, we lose nearly all inducement to inquire after any other and more ancient lunar zodiac, and shall be apt to call for very distinct and unequivocal evidence to convince us that any such ever existed. If there was a primeval system in the central position of Chaldea, why should the countries which lie all about that centre have received it by the circuitous route which leads through India? Or, if the Arabs once possessed it by direct derivation from its original owners, why should they have relinquished it later, to adopt the new form into which the Hindus had developed it?

The assumption of such an obsequious temper on the part of the Arabs, that, in deference to their Indian teachers, they should discard an asterismal series which they had long employed, and which the Koran had mentioned and ratified, is to me quite incredible; rather than admit it, I should be entirely ready to give up either the original derivation from Chaldea, or the later from India. That the Indian *nakshatras* were really adopted by the Arabs in place of their own asterisms, Weber regards as proved by the known communication of astronomical knowledge from India to Arabia in the early centuries of Islam, and the powerful influence exercised at that period by the Hindu science upon the Arab. But he overlooks one or two difficulties, which appear to me to vitiate his argument, and well-nigh overthrow his whole theory. We have, in the astronomical text-books, distinct and unequivocal information as to what the *nakshatras* were at a period certainly prior to this supposed communication. Whatever may have been the earlier changes of the system, the *Siddhântas* are entirely accordant as to what it had become in their day; and it is at least altogether probable that for some time previous there had been no important alterations made in it, or more traces of them would have come down to us. • Is it to be credited, then, that when the Arabs were thus submissively giving up their own system in favor of the Hindu, they would at the same time have been independent enough to vary from their teachers in ten out of the twenty-eight groups, or more than one third of the whole number? * and yet more, that out of these ten they would have taken no less than six * from among those which, according to Weber, the Hindus had communicated to the Chinese nearly a thousand years earlier, but had themselves since given up? These discordances and coincidences appear to me to prove beyond all reasonable doubt that there has been no copying of the Hindu system on the part of the Arabs in the historical period; if they derived anything from India, it must have been at a time nearer to the remote date when the communication to China took place, if any such there was. Whether the Arabs were led more by Greek or by Hindu influence to change the beginning of their series from the correspondent of *Kṛttikâ* (*Thuraiyâ*) to that of *Açvinî* (*Sharatân*) is a very indifferent matter, and not worth debating, as it can have no bearing upon the question at issue. The change was no arbitrary one, but a natural consequence of the fact that the equinox had receded to near the beginning of *Açvinî*; the Greek and the Hindu astronomies would both equally have

* See the notes to the *Sûrya-Siddhânta*, chapter viii., especially the table on page 200 (*Jour. Am. Or. Soc'y*, vi. 344); also the comparative table given above (p. 45).

pointed out this fact and suggested the transfer; and the precept or example of either might have been followed, without any reference to the derivation of the *mandzil* themselves.

Whether, farther, the lunar zodiac of which the record is found in the Bundehesh is to be regarded as derived from a Hindu or an Arab source, or whether it is the direct descendant of a presumable original system different from either of these, is, of course, an open question, and to be decided, if at all, along with the general question of the origin and propagation of the asterismal system. If the sum of all the evidence gathered shall make it probable that the institution was first devised upon the banks of the Mesopotamian rivers, and spread thence to the surrounding countries, then it will seem most likely that Persia also received it from that quarter: if, on the other hand, India shall appear to be its true home, we shall have no difficulty in admitting that the series taught in the Pârsî scripture had no other source than India. The lateness and scantiness of our information concerning it puts it necessarily in this doubtful and subordinate position. But I cannot without a protest allow Weber to set it down summarily as of Hindu origin, upon the sole ground that the series as recorded appears to begin with the member corresponding to Aqvinî. Besides the entirely dubious bearing of this fact in any connection, as set forth just above, there is here a special reason why the enumeration of the lunar asterisms could not begin otherwise than it does, even had the correspondent of Krttikâ been, to the apprehension of the Pârsîs, the one best entitled to stand at the head of the series. The document commences with stating the division of the zodiac into twelve signs, Aries, Taurus, etc.; these, it goes on to say, are divided, from their beginning, into twenty-eight portions, whose names are next rehearsed. How, in such a condition of the record, could the twenty-eight-fold division be made to begin otherwise than in accordance with the twelve-fold—that is to say, with Aqvinî, the head of Aries?

What are then, finally, the true grounds for suspecting that India received her system of *nakshatras* from abroad? By far the strongest of them, in my opinion, is the appearance of the same system in the possession of so many other Asiatic nations, and in the case of the Chinese, at least, from so early a period. That the hypothesis of origination in India is positively excluded by these facts I would by no means claim: I only assert that they are much more readily explainable by supposing that the institution was first invented and applied at a central point like Chaldea, the seat of empire, commerce, and culture which are known to have had wide-reaching connections and influence in every direction. Hindu propagandism, so far as we know, began with Buddhism; and that Buddhist missionaries could

have made the *nakshatras* a familiar and accepted institution in China as early as 250 B. C. is hardly to be believed. The claim advanced by Weber, that the development of the Tao philosophy shows such signs of Hindu influence as to make probable an ante-Buddhistic intercourse and communication between the two countries, is much too indefinite in form and doubtful in substance to be allowed any weight. To found important historical conclusions upon analogies between the doctrines of two schemes of mystical philosophy is, I should think, a proceeding of more than questionable soundness.

The force of this general argument of probability is supported by certain considerations derivable from the form of the Hindu system and the character of the Hindu people. As regards the former, the Arab and Chinese series seem to be at several points in nearer agreement with the presumable original order of the asterisms than is the Hindu; while the latter, which we can follow back in contemporary documents almost to the time of its first employment in India, shows no signs of change at these points, but rather the contrary. I find it hard to believe that Abhijit, Çravaṇa, and Çravishthâ (Lyra, Aquila, and Delphin) were included in the series as at first constituted; yet their presence among the *nakshatras* appears to me to go back beyond any time at which we could conceive the system communicable to other peoples—even to the very first period of the currency of the system in India. Again, the Hindus were not a people of such habits of mind that we should expect to see arise among them an institution like the lunar zodiac, of so practical a bearing, founded upon faithful and long-continued observations of the heavenly bodies, and intended for chronometrical uses. In the Hindus as students of the heavens, as observers of celestial conditions and phenomena for other than superstitious ends, my faith, I must acknowledge, is but the smallest. Their failure to notice the lesser planets until so late a time confirms me in this view. Throughout the whole period during which the system of lunar asterisms was in its full life and vigor, there is no mention to be found in Hindu authorities of any such bodies as planets: they do not make their appearance, as Weber has pointed out, until we meet with them in works showing the influence of the Greek astronomy. But it is not easily to be credited that a people who had so industriously and fruitfully contemplated the movement of the moon among the stellar bodies as to make an original and independent choice of twenty-eight groups of stars along her track for the purpose of marking her daily progress, could have failed to be struck by, and to make some account of, those other brilliant orbs which, like her, went round and round upon almost the same track. It is a vastly less difficult supposition that they may have borrowed

the series from some other people, and have applied it to the only practical uses for which they felt its need—even giving it, in connection with those uses, a fuller development and greater prominence than it elsewhere received—without taking any particular notice of the other planets. Once more, the acuteness and good sense which could give origin to the institution as at first established are hardly reconcilable with the perversity which should lead to the substitution in India, in place of the primitive asterisms, of several groups lying so far away from the moon's track. I am unwilling to believe that the same nation which originated the system could at a later period compel it to endure such a disfiguration.

This is the array of probabilities upon which I base my suspicion that the Hindus did not, after all, originate the primitive system of lunar asterisms represented to us by the *nakshatras*, the *mandzil*, and the *sieu*. That it is but scanty, I freely admit: it is not of a character to compel belief, and I can quarrel with neither the candor nor the good sense of any one who shall refuse to be moved by it. I only claim that it is sufficient to prevent us from maintaining with confidence and dogmatism the derivation from India, either directly or indirectly, of the *mandzil* and the *sieu*, and to lead us to look with expectation rather than with incredulity for the appearance of evidence which shall show some central or western Asiatic race to have been the inventors of the lunar zodiac.*

I would add here a few remarks and explanations respecting one or two matters in Weber's essays not directly bearing upon the special point which we have hitherto been discussing.

Prof. Weber is still sanguine in his hope of making the Hindu names of the months—which are, by universal acknowledgment, derived from the *nakshatras* in which, during the period of a

* Prof. Weber has kindly called my attention to the fact that M. A. Sedillot, in his *Matériaux pour servir à l'histoire Comparée des Sciences Mathématiques chez les Grecs et les Orientaux* (Paris, 1849; pp. 467-549), rejects Biot's views of the Chinese origin of the lunar zodiac, and claims the honor of its invention for the Arabs. As I have not access to his work, I cannot judge the grounds upon which he founds this claim; but neither can I believe them to be of a convincing character. It must be very difficult, even if the institution be actually of Arab origin, to prove the fact, because the Arabic literature is so much more modern than that of the Hindus and Chinese.

It may be worth while farther to note here that Lassen, in his very last work (*Indische Alterthumskunde*, Anhang zum iii und iv. Bande; Leipzig, 1862; p. 72), pronounces Colebrooke to have shown (*dargethan*) that the Arabs received their lunar mansions from the Hindus. The statement is wholly and reprehensibly inaccurate: Colebrooke has neither done nor attempted to do any such thing. In the article to which Lassen refers (*Essays*, ii. 322), after expressing his inclination to the opinion, contrary to that of Sir William Jones, that the *mandzil* and *nakshatras* have a common origin, he says: "I apprehend that it must have been the Arabs who adopted (with slight variations) a division of the zodiac familiar to the Hindus. This, at least, seems to be more probable than the supposition, that the Indians re-

year, the moon was full in each of her successive revolutions—yield a date as that of their fixation. To the remark made by us in the notes to the *Sûrya-Siddhânta* (xiv. 15, 10), that, in the nature of things, the moon's opposition to the sun must occur at all points of the zodiac in succession, and that hence no system of names derived from the *nakshatras* containing full moon could be continuously correct, he interposes the objection that we do not seem to take sufficient account of the *yuga*-period, of five or six years, within which the differences of solar and lunar time were reconciled. But he can hardly, I think, have made clear to himself what was the bearing and pertinency of this objection: to me it seems entirely irrelevant. The moon's opposition is a real phenomenon, depending solely on the times of revolution, and the varying rates of motion, of the sun and moon, and no artificial scheme of reconciliation of solar and lunar reckoning can possibly prevent its happening where those times and rates require, and so at all possible points on the ecliptic. In order to illustrate, however, by an example the relations of this question, I have calculated from the Nautical Almanac the longitude of the moon at her full in each month of a period of eleven years, from the beginning of 1854 to the end of 1864, and, by allowing in every case for precession, have reduced these longitudes to positions in the Hindu fixed sphere, determining the *nakshatra* in which each full moon occurred: reckoning, according to the *Sûrya-Siddhânta*, from a point ten minutes east of the star ζ Piscium as the commencement of division, and allowing thirteen degrees and twenty minutes of longitude to each asterism. During these eleven years, I find that full moon occurred six times in each of the asterisms *Açvinî*, *Pûrva-Phalgunî*, *Citrâ*, *Anurâdhâ*, *Mûla*, *Uttara-Ashâdhâ*, and *Uttara-Bhâdrapadâ*; four times each in *Kṛttikâ*, *Maghâ*, *Hastâ*, *Viçâkhâ*, *Purva-Ashâdhâ*, and *Revatî*; and five times each in all the other fourteen asterisms. The same series of asterisms as places of

ceived their system from the Arabians." . . . This was written in 1807. Ten years later, Colebrooke had come to hold the same opinion with much greater confidence; he says (*Essays*, ii. 447): "They [the Hindus] had a division of the ecliptic . . . seemingly their own: it was certainly borrowed by the Arabians;" but he does not appear to have been strengthened in it by any new and deeper investigation of the subject, for he simply refers his readers, for authority, back to the other passage, quoted above. Lassen should have said, then, that Colebrooke conceived a suspicion, which time deepened into a persuasion, that the Arab lunar mansions were a copy of those of the Hindus: and nothing more. Lassen's looseness of statement upon this point is, I regret to say, much of a piece with his whole treatment of the subject of the Hindu astronomy. He seems not to have looked far enough into it to discover its difficulties, and his account by no means represents the results of the latest investigations of other scholars. To maintain, for instance, that *Âryabhatta* was the founder and author of the Hindu astronomical system, is very much like maintaining that *Vyâsa* was the author of the *Vedas*, epics, and *Purâṇas*: the former assertion, no less than the latter, suits the Indian archaeology of fifty years ago far better than that of the present day.

the moon's full does not anywhere recur in two successive years: nor, indeed, is it possible that such should ever be the case; the names *Çrâvaṇa*, *Bhâdrapada*, *Âçvina*, and *Kârttika* can never be strictly applicable in four successive months, since the end of *Çravana* is so far ($92^{\circ} 10'$) from the beginning of *Kṛttikâ*, that the moon cannot possibly be full in the latter asterism the third time after she has been full in the former. But the series which commences in January 1854, and ends in September 1855, is precisely the same with that which begins in January 1862, and ends in September 1863.* Moreover, the Metonic cycle of nineteen years, being approximately a common multiple of the times of revolution of the sun and moon, and also nearly equal to twice the period of revolution of the moon's line of apsides, cannot fail usually to bring around the same series of asterisms, as stations of the full moon; by way of example, I have calculated the year 1844, and find it to correspond in every point with 1863. There is no year, among those included in this examination, during which the accepted names of the months would be derivable throughout from the asterisms in which the moon was actually full; but, twice in the period, there is a series of thirteen full-moon stations, of which eleven would give the true names of the months;† and, in the other two months, opposition between the sun and moon takes place at points removed, in the first series, only one and a quarter and one and two thirds degrees from the limits of the asterism which would give the true name, and, in the second series, only one half degree and four degrees, respectively. Upon either of these two successions of full-moon stations, now, as it seems to me; or upon any other of the same character, the actual scheme of month names might have been founded. We must beware of transferring to the period of origination of these names the precise divisions and exact observations of modern times. To lay out with accuracy the limits of the twenty-seven portions into which the ecliptic was divided was certainly not in the power of the ancient Hindu astronomers. Nor were they capable of

* It is as follows: Jan., Pushya, Feb., Maghâ; Mar., Uttara-Phalgunî; April, Citrâ; May, Anurâdhâ; June, Mûla; July, Uttara-Ashâdhâ; Aug., Çravishtâ; Sept., Pûrva-Bhâdrapadâ; Oct., Revatî; Nov., Bharanî; Dec., Mrgâçirâ; Jan., Punarvasu; Feb., Âçleshâ; Mar., Pûrva-Phalgunî; April, Citrâ; May, Viçâkhâ; May, again (June, 1863), Jyeshthâ; June (June again, 1863), Pûrva-Ashâdhâ; July, Çravana; Aug., Çatabhishaj; Sept., Uttara-Bhâdrapadâ. In Oct. 1855, the asterism is Âçvinî; in Oct. 1863, it is Bharanî.

† They are Sept. 1856 to Sept. 1857, and Sept. 1859 to Aug. 1860. The former of the two runs as follows: Sept. 1856, Uttara-Bhâdrapadâ; Oct., Âçvinî; Nov., Kṛttikâ; Dec., Mrgâçirâ; Jan. 1857, Punarvasu; Feb., Maghâ; Mar., Uttara-Phalgunî; April, Citrâ; May, Viçâkhâ; June, Jyeshthâ; July, Uttara-Ashâdhâ; Aug., Çravishtâ; Sept., Pûrva-Bhâdrapadâ. In the other series, we have in Sept. 1859, Pûrva-Bhâdrapadâ; in Feb. 1860, Âçleshâ; July, Pûrva-Ashâdhâ; August, Çravana.

fixing the precise place and moment of the moon's full. To their eyes she might seem to rise full, although she had already passed by a few degrees the exact point of opposition, or although she had not yet quite reached that point. Their skill is not to be supposed equal to the task of ascertaining just how far past the moment of full moon was, when it had occurred before sunset, or just how long it would be in coming, when it had not yet occurred at sunrise.

Considering, then, these two capital difficulties: first, the liability of any given series of full-moon stations to recur indefinitely, at longer or shorter intervals; and second, the inapplicability of calculations founded on an exact division of the ecliptic, and a precise determination of the place and moment of the moon's opposition, to the conditions of the primitive time when the months were named from the asterisms, it must be conceded, I think, that to hope for the ascertainment of that time by astronomical calculation is entirely futile, and that the calculator who, in compliance with Prof. Weber's invitation, should set himself at work to determine it, would show a vast deal more of enterprise than of good sense.

Another point with regard to which Prof. Weber appears to have fallen into error, is the relation to one another of Cāitra and Phālguna as spring months. More than once, in the course of his essays, he supposes himself to discover evidence that Cāitra, as the first month of spring, has usurped the place earlier occupied by Phālguna; and he finds the substitution a natural one, and accounted for by the precession. In this, however, he has precisely inverted the true relations, for the tendency of the precession is, in fact, to bring Phālguna into that relation to the spring which was formerly held by Cāitra. Thirteen centuries ago, the vernal equinox was at the beginning of Aṣvini; at that time, therefore, when the moon was full in Citrā, the opposite asterism, the sun was very nearly in the equinox. At present, the equinox has receded about eighteen degrees, into Bhādrapadā; hence, when the moon is full in Citrā, the sun has considerably passed the equinoctial point, and the month Cāitra falls at a later time in the spring than formerly, while the month Phālguna, with the full moon in Uttara-Phālgunī, must much more often include the equinox. That is to say: Cāitra, as a month occupying a given relation to spring, is nearly two thousand years earlier than Phālguna, and nearly two thousand years later than Vāiṣākha, in the same relation. And if we find in the early Hindu authorities signs of a balancing between Cāitra and Phālguna as first month of the vernal season, it is only owing to that uncertainty and freedom of choice which obtains as to the determination of the beginning of spring; in part, also, as we may well suppose, to local varia-

tions of climate, which bring on the reawakening of Nature earlier in one region than in another.

This misapprehension, although in itself insignificant, has seemed to me to call for a few words of correction, in order to guard against an erroneous estimate of the chronological order of authorities favoring the one or the other month as the beginning of spring.

Other points of interest, suggested or discussed in these learned and fertile essays, must be left untouched here, as this paper has already extended itself much beyond its anticipated limits.

I cannot, however, quit the subject of the origin of the *nakshatras* without taking notice of the recently published views respecting it of Prof. MAX MÜLLER, of Oxford.* This scholar, in the Preface to the fourth volume of his valuable edition of the Rig-Veda and its commentary (London, 1862), has devoted considerable space (pp. xxxviii-lxxi) to a discussion of the question "Are the Indian Nakshatras of native or of foreign origin?" The date of the Preface is October 1862, and its publication appears to have taken place in the course of the next month; but its transmission to America was by some means so delayed that it did not reach my hands until April 1863, at which time the revival of the foregoing article, and its preparation for the press, were so far advanced that I could not include the doctrines of Müller, along with those of Biot, and Weber, in the same discussion. Since, however, so eminent an authority may not be passed by unheeded in an essay like the present, which is designed to be a summary and criticism of opinions respecting the relation of the Chinese and Hindu asterisms, I propose to go on and examine here, as succinctly as I can, his view and the arguments which he adduces in its support.

Prof. Müller declares himself unequivocally a believer in the originality of the *nakshatras*. He had "felt," as he informs us, on first reading, in 1846, the articles of Biot, "that the Brahmans could not have borrowed the idea of the Nakshatras from the Chinese." He wrote to the Asiatic Society of Bengal, in April 1860 (see Journ. As. Soc. Bengal, vol. xxix., 1860, p. 200), that he should never believe that the Hindus borrowed from the Chinese: he would as soon believe that the Greeks borrowed their astronomy from the Goths. If M. Biot had been cognizant of the sentiments thus expressed by so distinguished an Indianist, he would probably have penned with an increased intensity

* This addition to the original article was prepared in order to be presented to the Society at its annual meeting, in May 1863; but, being crowded out by the press of other matter, its communication was deferred until the next meeting at New Haven, in October 1863.

of feeling his denunciation of those philologists who decide important historical questions from an inward persuasion, rather than from an intelligent and dispassionate examination of the arguments brought forward on the one side and the other. And although he might have done injustice to Prof. Müller by ranking him in such company, I fear that his impression would have been strengthened rather than removed by the manner in which the latter opens his present discussion of the subject. On his first page, our author appears to set before us, not so much the inherent implausibility of Biot's views, and their discordance with well-established historical facts, as the great undesirableness of permitting ourselves to be persuaded by the arguments employed to support them. It is by an appeal to our prejudices, rather than to our reason, that he would nerve us to meet with incredulity and denial the confident claims of the great French astronomer. Vedic studies, he warns us, are likely to lose their chief charm for us, if we can be brought to believe that the Hindu mind was influenced at so early a period by foreign civilization. Moreover, if the Hindus should be supposed to have learned any astronomy from the Chinese, "would not the national individuality of the Aryan race be tainted in its core, and the Turanian man rise superior to his Aryan and Semitic brothers?" Now these are considerations which will have some value, and may even assume a controlling importance, with those who are more partizans of Vedic originality, and Indo-European superiority, than lovers of simple truth; but I should have thought it better and safer if Müller—who, as no one will doubt, is able to keep his own mind from being unduly swayed by them—had avoided the risk of warping the possibly weaker intellects of some of his readers, by laying before them such selfish inducements to judge the case unfairly. Moreover, I think that he considerably exaggerates the danger to which we should expose ourselves by too frank concessions to Chinese claims. The proper Vedic period is not liable to be robbed of its character of originality by proof that the system of lunar asterisms came from China, or from anywhere else, since the hymns of the Veda contain no trace of it, save a doubtful reference or two, in parts of the text presumably belonging to the second age. And as for the Brâhmana period, we ought to rejoice if an opportunity were given us of throwing off a part of its responsibility upon other shoulders than those of the Hindus. No one has depicted its character more tellingly than Prof. Müller himself (see his *History of Ancient Sanskrit Literature*, p. 389): it is an era of superstition and puerility, which attracts less of our admiration and more of our contempt than any other in the long history of the Hindu mind. There is little hope, however, of our shifting its burden upon the Chinese,

the Babylonians, or any other people out of India; for the borrowing of such an institution as the *nakshatras* does not necessarily imply any deep or abiding foreign influence. To claim, as Müller does, that the lunar zodiac is at the root of the Hindu sacred calendar, and that none of the sacrifices described in the *Brâhmanas* is conceivable without it, is, in my view, greatly to overrate its importance. The ancient calendar of the Hindus, as of other nations, undoubtedly consisted in the observation and reconciliation of the three natural and independent periods, the day, the synodical month, and the year, and did not need to rest on a system of asterisms. The libations of morning, noon, and evening, the ceremonies at new and full moon, the great sacrifices accompanying the notable operations of nature, as the recurrence of the harvests and the changes of the seasons, are not dependent on a lunar zodiac. This latter has only furnished a convenient nomenclature for the lunar periods, and a suitable frame-work for the observation and description of celestial phenomena. And such a handy mechanical device, as it may fairly be styled, is precisely of a character to pass from one people to another, as it appears to me, without involving the exertion of any potent and wide-reaching influence by the former upon the latter.

As regards the superiority of the Semitic and Indo-European varieties of humanity to the Chinese, I can hardly believe that Prof. Müller seriously regards it as hinging upon the question whether China did or did not invent the lunar zodiac. Our position as leaders in the world's history is too firmly founded to be so easily shaken. We do not need to feel smitten and humbled even when we have to confess that the Chinese were in possession of gunpowder, the mariner's compass, and the art of printing, long before we were, and perhaps furnished us one or all of these fundamental elements of our modern progress. We are secure enough in our place to be able to do the utmost justice, in great things as in small, to our poor neighbors of the furthest East. It cannot be denied that India might, with signal advantage, have learned much from China: had Chinese influence been powerful enough to engraft upon the wonderful acuteness and profound spirituality of the Hindu mind something more of the practical shrewdness, the concern for things sublunary, the patience of research, the respect for the arts of observation and record, which have always distinguished the inhabitants of the Middle Kingdom, it would have been a gift of inestimable value. Why, then, fear to acknowledge that the Hindus may have received from China an important element of their early astronomy, as they derived from Greece the whole groundwork of their later science? There was a time when the latter imputation also would have been scouted, as an insult

to the antiquity and originality of Indian wisdom: if Indianists have learned to admit and reconcile themselves to it, they may much more easily become disposed to accept the former, if supported by sufficient proofs.

It may seem superfluous to protest against these expressions of Prof. Müller's in an essay a considerable part of which has been devoted to refuting M. Biot's arguments in favor of the Chinese origin of the lunar zodiac. But, while I regard all probabilities as opposed to the Chinese pretensions, I have yet not tried to prove them impossible, and I would fain see the way kept fairly open for demonstrating a claim on behalf of the Chinese, or of any other nation which shall finally be found entitled to the honor. The admission, into such an investigation, of questions respecting the charm of this or that literature, or the honor of this or that race, seems to me a thing to be deprecated. The wish to know the truth ought to be a sufficient motive to us in the prosecution of the inquiry: in history, a very little truth is worth more than a great deal of sentiment.

The grounds which Muller brings forward in support of his persuasion that the *nakshatras* cannot and must not be of any other than Hindu origin are, in my view, altogether untenable. He does not, any more than we formerly did in the notes to the *Sûrya-Siddhânta*, attempt a refutation of Biot's arguments for the originality of the *sieu*, but accepts them and their results *in toto*, even treating as an established and indisputable fact the most arbitrary and implausible of all Biot's assumptions: namely, that four of the *sieu* were added by Cheu-kong to an earlier system of twenty-four. He expresses, indeed, a general distrust of the authenticity of ancient Chinese dates and data, and even of the accuracy of identification of the stars limiting the *sieu*, but without entering into any detailed examination and criticism, like that which Weber has made so damaging to Biot's alleged authorities. But, while accepting Biot's premises, he rejects his conclusion: from the originality of the *sieu* he will not infer the derivation of the *nakshatras*; and for this he gives two reasons, which we will proceed to consider.

In the first place, he is not satisfied that any genetic bond of connection has been shown to exist between the Chinese and Hindu systems. He points out the fact, set forth in our table of the correspondences of the *sieu*, the *nakshatras*, and the *manâzil* (Journ. Am. Or. Soc'y, vi. 344; *Sûrya-Siddhânta*, p. 200), that the points of coincidence between the two former are only seventeen out of twenty-eight, or less than two thirds of the whole series, and thinks the agreement not so close as to be unequivocal evidence of identity of origin. But this is putting the subject of correspondences in a very imperfect light, by leaving out of the comparison the third member, the *manâzil*. The

same table shows that the Chinese system agrees with either the Hindu or the Arab in twenty-three out of its twenty-eight constituent members, and each of these six additional correspondences is really as good evidence of a genetic connection between the *sieu* and *nakshatras*, as between the *sieu* and *manāzil*. If it be possible for one who compares only two of the three series to look upon their accordance as accidental, no one who views them all together can doubt that they are one and the same system. I need not dwell longer upon this objection, because the table given above (p. 45), with the accompanying explanations, has, as I hope, set the relationship of the three in a clear and convincing light, and also because Prof. Müller does not place his main reliance upon a denial of relationship, but candidly declares himself prepared to find that the discordances of the *sieu* and the *nakshatras* may be accounted for, and their community of origin demonstrated.

But, in the second place, after making this admission, Müller goes on to say (p. xlviii): "Every Sanskrit scholar will most readily surrender the whole system of the Tārās and Yoga-tārās, or junction-stars, whether twenty-seven or twenty-eight in number, as of foreign origin." Against this assertion I must enter my most earnest protest. If the asterisms, the groups of stars, are to be given up as of foreign—that is to say, of Chinese—origin, I can see nothing left to contend about: the *nakshatras* were borrowed from China. That Müller can hold to the independent Hindu origin of the system of asterisms, and yet believe the asterisms composing the system to have been obtained from abroad, seems almost a contradiction in terms: it is only to be explained and reconciled by taking into account Müller's peculiar view of the character of the system. In forming this view, he would seem to have followed the lead of Weber, adopting the latter's misapprehensions refuted in the earlier part of this essay, but with a modification which makes them still more objectionable. Weber, as we have seen, regards the system of "asterisms" (*nakshatra*) as primarily and chiefly a system of divisions of the ecliptic, only accompanied by a series of stars and star-groups, of which the particular members were indeterminate, and left to the selection of every system-maker. Müller goes yet further, and thinks it merely a system of theoretic divisions, having nothing to do with stars or groups of stars until a very modern date, when the example of the Chinese, or of some other nation, suggested to the Hindus the selection of an asterismal series, such as we find it in the astronomical textbooks. I cite the words in which this is laid down as a fundamental proposition, a kind of preliminary definition, the acceptance of which is necessary in order to the intelligent conduct of the discussion which is to follow: "Nakshatra has three princi-

pal meanings. Originally it meant stars in general; secondly, it meant the twenty-seven equal divisions of the heavens, constantly referred to in the *Brâhmaṇas* and *Sûtras*; and thirdly, it meant the twenty-eight asterisms, consisting of either one or more stars, which in later scientific treatises served as *points de départ* for astronomical observations. In order to avoid confusion I shall in future use *Nakshatra* in the second sense only, translating it by lunar mansions, while I use *Târâ* instead of *Nakshatra*, if employed in the third sense, translating it by asterism" (p. xlvi). Again he says (pp. xviii-ix): "the whole system of the *Târâs* and *Yoga-târâs* . . . never occurs in the ancient literature of the Brahmins, it is not mingled with any of their ancient rites or traditions. It comes in at a time when India was no longer shut out from the rest of the world, and when a scientific study of astronomy had succeeded to the homely rules of the Vedic priests." Once more, in the final summing up (pp. lxx-lxxi): "that *Nakshatra*, meaning originally stars in general, was fixed upon as the word to be used, κατ' ἐξοχήν, of the twenty-seven equal divisions of the starry sky, marked out by the periodical course of the moon; . . . but that in later times certain stars, twenty-eight in number, and vaguely corresponding with the twenty-seven ancient *Nakshatras*, were selected for the purpose chiefly of fixing the movements of the planets, but likewise for other astronomical and astrological purposes."

It is unnecessary for me to express my opinion that this understanding of the character of the *nakshatras*, which totally divorces the star-groups from the regions of the sky marked and defined by them, is entirely erroneous. The preceding parts of this article have presented in more or less of detail the abundant evidence which shows that the *nakshatras* really are from the beginning what by their name they purport to be, asterisms, and not spaces in the heaven, or divisions of a circle; and I do not propose to repeat that evidence here, even in summary. Müller's view of their nature cannot, as I am persuaded, be sustained for a moment by any pertinent or solid argument. And it is to be noticed that he does not attempt to prove its correctness, or to show reason for believing that the *Brâhmaṇas* and *Sûtras*, when they speak of "asterisms," really mean "divisions:" he would have us grant him his whole thesis as a postulate. I will only proceed to point out some of the misapprehensions it implies, and the difficulties in which it involves its author.

His account of the meanings of *nakshatra*, I would first remark, is open to serious philological objection, as well as historical. That a word primarily signifying star in general should come next to mean a division of the heavens, and only in the

third place a particular star or group of stars, would strike any one accustomed to trace out the genesis and connection of meanings as strange and hardly credible. The third signification, such a one would say, is clearly anterior to the second: the word meaning star in general must first have had its application restricted to certain stars or star-groups, and then have been used to designate the parts of the heavens in which these were situated: if it be not so, some special reason for the anomaly must be shown to exist. An additional indication that Müller's classification is erroneous is to be seen in the fact that it compels him to give up, as names for the *nakshatras* regarded in the light of stellar bodies, all the terms by which the Hindu authorities, the oldest and the newest alike, have been used to call them—namely, *nakshatra*, *bha*, *dhishnya*, *rksha*, every one of them meaning 'star or constellation, asterism'—and to replace them by a new and strange word, *tārā*, 'star,' which, so far as I know, has never been employed in India to designate the lunar asterisms, and is quite unsuited to such a use, as it denotes a single star, while they were chiefly groups. The proposed nomenclature does not at all commend itself to our acceptance. If Müller's second and third meanings are to be distinguished, it should be by reserving *nakshatra* for the third, and borrowing from the astronomical treatises the term *bhoga*, 'portion' (or *bhabhoga*, *nakshatrabhoga*, 'portion of [the ecliptic belonging to] an asterism'), for the second.

Again, Prof. Muller altogether misunderstands our opinion, expressed in the notes to the *Sūrya-Siddhānta*, respecting the time of selection of the junction-stars of the asterisms. He more than once refers to us as having shown that it took place in the course of the sixth century after Christ. We, in fact (see *Journ. Am. Or. Society*, vi. 355-6; *Sūrya-Siddhānta*, pp. 211-2), only claimed that those positions of the junction-stars which are recorded in the astronomical text-books must have been determined at or near that period. That, for instance, the *dhruvaka* or 'permanent longitude' of β Delphini, the junction-star of Ṛavishṭhā , was two hundred and ninety degrees, and its *vikshepa* or 'latitude' thirty-six degrees north, could only have been found by observation about the time referred to; but the choice of β to represent, in the calculation of conjunctions, the asterismal group composed of β , α , γ , and δ Delphini may have taken place as much earlier as we can see reason to suppose that the impulse to make it was felt. I do not, indeed, believe that it preceded by any considerable interval the actual definition of positions; but this is a mere matter of opinion, a corollary from my view of the history of the system, and it must be held carefully apart from a deduction legitimately drawn from astronomical data. Müller, however, commits the much more serious

error of confounding together and treating as one the original establishment of the asterisms, and the selection of one star in each as junction-star. He is willing to surrender, as of foreign origin and recent date, "the whole system of the Târâs and Yoga-târâs, or junction-stars;" etc., etc. Now the selection of one star out of a group only implies the previous recognition of the group; it can show nothing respecting the date of that recognition. Even if we had proved that β Delphini was constituted junction-star of Çravishthâ in the sixth century of our era, the constellation Çravishthâ might have been a member of a system of asterisms five hundred, or a thousand, or ten thousand years earlier; not the faintest presumption of a definite date is capable of being carried from the selection of the junction-star to the establishment of the asterism whence it is taken.

Nor is our author more successful in his attempt to show how the Hindus should have been led by the example of the Chinese to graft upon their system of divisions of the heavens a series of star-groups, corresponding to a certain extent with the Chinese *sieu*. He points out that in the sixth century, the time of "selection" of the junction-stars, Chinese travellers were traversing India, and Hindu priests settled in China; and that a Hindu religion, with its accompanying train of Hindu festivals, presumably requiring regulation by a Hindu calendar, had been imported into the Middle Kingdom: and hence the necessity for a compromise between the astronomical grammars of the two nations.* Now this would seem to be a good and sufficient reason why the Chinese should borrow the Hindu *nakshatras*, but I cannot see how it should account for the adoption by the Hindus of the Chinese *sieu*. If the Chinese could be led to import a religion from India, they might well enough take along with it an Indian calendar: but because emigrant Buddhist priests had taught a foreign nation to pray their prayers and keep their festivals, why should the Hindus at home, Brahmans, Buddhists, and all, have felt themselves under any obligation or any inducement to adopt an element of the astronomical system of that foreign nation which had no practical value for them, and of which, in anything like its proper form, they were unable to make use?

In connection with this part of his argument, Müller even refers to the addition of the twenty-eighth asterism, Abhijit, as made under Chinese influence, although, as we have seen above, that asterism is mentioned along with the others, in all respects as if one of them, in several authorities of the Brâhmaṇa and Sûtra periods, going back almost to the time of first appearance of the *nakshatra* system in India.

It must not fail, however, to be noted that in a single isolated passage Prof. Müller puts forth an opinion which would seem

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to show that he holds, after all, the true view of the character of the asterisms, and believes that the constellations bearing the names of the *nakshatras* were noticed and named by the Hindus before the division of the planetary path into lunar mansions was made. He says (pp. lxi-ii): "I hold then that the names given to stars or constellations, such as Kṛttikā etc., existed before the triseinadic division of the heavens became fixed; that the most interesting, though not always the most brilliant stars were selected to serve as exponents of the twenty-seven divisions." How this is to be reconciled with what he has elsewhere taught us respecting the restriction of the term *nakshatra*, in the second period of its use, to divisions of the heavens, and the late selection, under foreign influence, of the *tārās*, or constellations, and their *yogatārās*, or junction-stars, I do not at all see. The two doctrines, put together, would seem necessarily to lead to some such result as this: Before the specialization of the word *nakshatra*, a certain group of stars had attracted the attention of the Hindus, and they called it the *nakshatra* ('asterism' or 'constellation') Kṛttikā. When, however, they next fell upon the idea of dividing the heavens into equal spaces of thirteen and a third degrees each, they gave to one space the name of the *nakshatra* ('division') Kṛttikā, without reference to a star-group, or remembrance that any such had ever borne the same title. But finally, when they found the Chinese paying particular attention to one of the stars in the constellation of the Pleiades, which happened to be situated in that part of the sky which they had lately been calling the *nakshatra* ('division') Kṛttikā, and also, still more remarkably, to coincide with the group which they had anciently styled the *nakshatra* ('asterism') Kṛttikā, they "selected" the same constellation anew, and commenced calling it once more by its old name—and so of the others in the series. I do not in the least suppose that Müller consciously holds this doctrine, the simple statement of which is its sufficient refutation, but I am unable to combine in a different manner the separate items of his argument. There must be, as I cannot but believe, some indistinctness of view on his part, which prevents him from noticing the inconsistency of the separate opinions which he puts forth in different parts of his essay, or else some infelicity of expression, which forbids me rightly to apprehend what he intends to assert. Some of his statements are evidently ambiguous, admitting of more than one interpretation; but I have not succeeded in deriving from a diligent comparison of them any connected account of the history and character of the *nakshatras* which harmonizes them all, or which does not appear to be unequivocally at variance with some argument used, or some opinion recorded, in one or another part of the discussion.

We must, indeed—as Prof. Müller urges, in replying to our opinions advanced in the notes to the *Sūrya-Siddhānta* respecting the relation of Abhijit to the *nakshatra* system—distinguish carefully between the twenty-seven equal portions of the ecliptic and the twenty-seven groups of stars constituting the series of asterisms proper: that is to say, as I should interpret the caution, we must beware of confounding the *nakshatras*, which are constellations, with the regions of the sky defined and named by them, which are spaces or arcs. It would be an equally fatal omission, too, when we find a series of star-groups and a system of divisions so connected and identified as to be called by the same names, not to inquire carefully how they stand related to one another, and to which of the two the nomenclature originally and properly belongs. We are in no danger of mixing up in our minds the Greek signs of the zodiac with the *dodecatemoria*, or twelfths of the ecliptic; but neither do we view the two as unconnected, and suppose that the mere idea of a duodecimal division constitutes a zodiac. Müller's doctrine of the priority and independence of the divisions of the lunar zodiac seems equivalent to regarding Aries, Taurus, Gemini, etc., as names of ideal twelfth parts of the ecliptic, for which signs or constellations were at a later period invented. When we find zodiacal “signs” spoken of, and read of the Twins, the Scorpion, the Goat, and so on, we know that we are dealing with constellations, and with divisions only as founded on and determined by constellations: in like manner, when we meet with a system of “asterisms” (*nakshatra*), and find it composed of such members as the Ruddy (*rohini*), the Hand (*hasta*), the Brilliant (*citrā*), the two pairs of Beautiful Feet (*bhadrāpadās*), and the like, we cannot help drawing the same conclusion.

That the Greeks first divided the constellation of the Scorpion into two zodiacal signs, the Scorpion and the Claws, before the latter was set off and called the Balance, is in close analogy with the Hindu division of the three constellations Phalgunyas, Ashādhās, and Bhādrapadās, into two lunar asterisms each.

Whether Prof. Müller's understanding of the month and its relations is altogether correct, I am not quite sure; he has at least, I think, sometimes expressed himself with regard to it in a manner liable to misconstruction. “Lunar chronology,” he tells us (p. lxix), “seems everywhere to have preceded solar chronology;” and he goes on to prove it by evidence derived from various quarters. But the assertion is almost as much a truism as would be the statement that terrestrial chronology is more primitive than lunar. No measure of time is so forced upon man's attention and recognition, so enters into and affects his whole physical and moral life, as the earth's revolution on her axis, which, slightly modified by combination with her revo-

lution about the sun, produces the alternation of day and night. A human language with no word for "day" in it is an almost inconceivable anomaly. The next most conspicuous natural period is that of the waxing and waning of the earth's satellite, or the synodical month, and it is doubtful whether any people or tribe was ever met with, so careless of the operations and manifestations of Nature as never to have measured time by moons. In his extract from his own review of Mr. Hardwick, Prof. Müller says (p. xli) that "the primitive division of the year into lunar months must have taken place previously to the first separation of the Aryan family." I presume we have here merely a carelessness of expression, for Müller certainly would not seriously maintain that the month was a result of the division of the year into parts: as well might one hold that the day was a result of the subdivision of the month or week. The hour, indeed, is an artificially determined part of the day, and, when found in the possession of two peoples, is good evidence of a communication from one to the other, or to both from a common source; and the same is true of the week, as constituent part of the month; but day, month, and year are perfectly independent natural periods, which cannot but be observed alike by all nations. The year is brought to notice by meteorological changes, by the succession of the seasons, and it assumes different degrees of prominence and importance according to the latitude, the other natural conditions, or the mode of life, of different peoples: its conception as a period, the determination of its limits, the connection of its phenomena with the apparent movement of the sun, the assignment to it of a suitable name—all these are results of a closer, a longer continued, a more widely extended process of observation than is necessary in the case of the two lesser measures of time. In how many nations, even of considerable cultivation, do we find the process still incomplete, and time measured only by moons, or, in a larger way, by springs, by harvests, by rainy seasons, or the like.

The three natural periods which we have been considering are, of course, the solar day, the synodical month, and the tropical year. The sidereal day, the periodical month, the sidereal and anomalistic years, etc., have quite a different character, being, as it were, artificial measures of time, learned variations of the others, and indicative of a considerable advance in the art of observation of the heavenly bodies: their establishment and use is not to be inferred for any ancient people except from direct evidence. Even the possession of the lunar zodiac, the system of *nakshatras*, does not imply the practical employment of the periodical month as a chronological element, although it supposes a recognition of the period of the moon's sidereal revolution. One of the earliest and most important uses to which the

Hindus put the *nakshatras* was, as we have seen, to furnish a nomenclature for the series of synodical months. It has not been shown, so far as I am aware, that the month of twenty-seven days, or a little over, ever made any figure in the Hindu reckoning of time. That, in the artificial scheming in which the Hindus delight, they have set up months of this character, as well as of several others, and have formed years containing twelve, thirteen, and fourteen of them (years of 324, of 351, and of 378 days: see Weber's second essay, p. 281 etc.), is quite in order, but proves nothing as to the practical use and value of the period: we have nearly the same reason to suspect, when a Hindu author speaks of a year, that he means one of those unnatural and absurd combinations, as that, when he speaks of a month, he intends a periodical month. Liberal as the *Sūrya-Siddhānta* is in its enumeration of the different kinds of months, it knows of none which depends for its measure upon the moon's sidereal revolution.* On the one hand, therefore, I am of opinion that Weber over-estimates the importance in Hindu antiquity of this chronological element, to which he has directed attention in one or two passages of his essays; and, on the other hand, I fail to see the justification of Müller's stricture upon Weber, given in the following words (p. xlv., note): "What vitiates many of Prof. Weber's arguments is that he has not made it clear to himself in every instance whether the months he is speaking about are sidereal or synodical." If Müller had only taken the trouble to point out an instance or two where the failure to make such a distinction had misled Weber, and rendered his conclusions nugatory, we should have better understood what value to attach to this criticism: as the case stands, I must confess that I have not noted any cases where it applies; and on this account, as well as for the general reasons set forth above, I cannot but suspect it to be founded only in a misapprehension on the part of Müller himself.†

In Müller's estimate of the value to be attached to the *Jyotiṣa*'s account of the position of the colures as a chronological

* Its *nakṣatra māsa* (i. 12) is of quite another kind, being thirty sidereal days, or true revolutions of the earth on its axis.

† In the same note (on p. xlv.), Müller appears to me to come short of doing justice to Weber in one or two other particulars. When taking pains to say "I differ from nearly all the conclusions at which Prof. Weber arrives," he might better have added "as to the relations of the Chinese and Hindu asterisms;" for, as regards the Hindu system itself, Müller's opinions accord more nearly with Weber's than with those of any other authority who has treated the subject. Nor was he justified in referring to Biot as having treated Weber's essays with "withering contempt," even though he added at the same time his opinion that they "hardly deserved" it. The expression involves, in the first place, a gross error of fact, since the longer and more important of Weber's essays was not published until after

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datum, I fully concur. That position certainly yields as its exact date (supposing that the limits of the asterismal portions were precisely the same when the series commenced with Kṛttikā as when, later, it was reckoned from the beginning of Aṣvini) the twelfth century before Christ, and not the fourteenth, as Colebrooke supposed; but there are for the present, at least, and there are likely always to remain, insuperable difficulties in the way of drawing from it any date employable in constructing the framework of Indian chronology: we cannot be certain, in the first place, that the observation is of Hindu making, and not imported from abroad; again, admitting that it was made in India, we should have to allow it a range of several centuries, on account of its own difficulty, and the inaccuracy of the Hindus as observers; and finally, we have no means of attaching it definitely to any work, or class of works, or period, in the Vedic literature.

It remains to say something upon certain points brought forward and commended to our consideration by Prof. Müller, in the earlier part of his Preface, from Bentley's work on Hindu Astronomy. The former approves, upon the whole, the severe verdict of condemnation which, after as full and dispassionate a study of Bentley's lucubrations, I think, as any one has ever given them, we pronounced upon him and them in the notes to the Sūrya-Siddhānta. Yet he cannot resist the temptation to lay before us, in his Preface, long *verbatim* extracts from the Historical View of the Hindu Astronomy, neither qualifying nor rejecting them, but simply placing them before our eyes, and

Biot's death, and so could never have been greeted by the latter with either approbation or contempt. And, in the second place, the epithet "withering" was certainly very unfortunately chosen. We do not use that epithet except when we intend to imply that, in our opinion, the subject of the contempt is withered, or ought to be withered, by it, and to attribute to it that power in the present instance would be palpably most unjust. Each of the two disputants, it may be said, contemned the other's method and arguments; Weber depreciating the scientific mode of research as compared with the philological, Biot setting at naught the philological reasonings and critical doubts of an adversary who confessed inability to meet him on scientific ground. If we may judge by results, Weber's contempt ought to be the more "withering" of the two; for while his essays will always remain a most valuable mine of documentary information respecting the *nakshatras*, it is certain that all Biot's labors upon the *siu* and the *nakshatras*—whatever may be the value in other respects of his researches in the Chinese astronomy: of that I am no competent judge—have done nothing but embroil the subject; by casting his immense weight of authority on the side of a most untenable theory, he has greatly impeded the general adoption of the true view. Biot, as we have seen, did not deal gently with those Indianists who differed from his opinions upon this matter, and Müller should have been restrained by a fellow-feeling from too vividly depicting Weber as prostrate beneath his contempt, seeing that it would also have been poured out without stint upon one who, like himself, not only refused to believe that the *nakshatras* were a mere distorted imitation of the *siu*, but even doubted whether the two systems were genetically connected.

leaving us to draw what conclusions we may or can from them: he himself thinking them "deserving of more attention than they have hitherto received." In this opinion I cannot agree with him: I believe that they have already met with all the attention due them, and, being readily accessible where they stand, were likely to get all that they should hereafter be found to merit; and it seems to me hardly consonant with the dignity of the editor of the *Rig-Veda* and author of the *History of Ancient Sanskrit Literature* thus to make himself the uncriticizing reporter of the wild speculations of a confessedly unsafe authority. We expect from a scholar of the position and reputation of Müller actual guidance through the dark places of Hindu archæology, and not a mere introduction to such blind leaders as Bentley. Since, however, he has chosen to lend a *quasi* sanction to the latter's reasonings and their results—for, let him qualify his approval of them, and caution us against their possible unsoundness, as much as he will, his deeming them worthy of quotation in such a place must give them a currency and consideration which they would never of themselves have attained—I cannot refrain from accepting his challenge, and submitting them to an examination which shall attempt to show what they are really worth.

Bentley claims that the Hindu names of the months, derived from the lunar asterisms, could not have been formed earlier than 1181 B. C. (not, as Müller inadvertently states, that they could have been formed only in 1181 B. C.). The month *Çrâvana*, he says, *always began at the summer solstice*, and it was not until the date mentioned that the solstice came, by the precession, to stand opposite to the end of the asterism *Çravana*. And as, by universal consent, the moon's opposition in *Çravana* gave name to the month *Çrâvana*, it follows, with the force of a mathematical demonstration, that the name cannot be older than 1181 B. C. Now this argument is beautifully characteristic of Bentley. Allow him to make his own premises, and he has astronomical knowledge enough to draw from them, in many cases, the true conclusion. It is very much his habit, too, to make his premises: his most arbitrary assumptions, his most daring conjectures, he puts forward with the same unflinching confidence which might attend the announcement of a truism, and they are therefore apt to impose upon those who have not learned what his authority is worth, and have been incautious enough to trust themselves to his guidance. The whole calculation, in this case, hinges on the alleged fact that the Hindus always began their month *Çrâvana* at the summer solstice. It is

must repose, of course, on documentary evidence; and here is where our author's great lore, and rarely equalled familiarity with the ancient Hindu literature, might most worthily have been brought in to aid the astronomer Bentley, who knew little if any Sanskrit, and was wanting to a rare degree in philological and historical learning and judgment. If Müller had proved to us that the other was right in this one particular, he would have rendered the calculation and the resulting date truly valuable for the history of Hindu astronomy. But he has not done so, nor is it probable that any one will ever be able to do so. Bentley's assertion implies that the months to which the asterismal names originally belonged were solar months, twelfth parts of the tropical year. But, if we know anything about the matter from the literature of the period during which they came into use, we know that they were applied to true lunar months, synodical revolutions of the moon. Solar months, and equinoxes and solstices as division-marks in the year, are unknown to the Brāhmanas. Even in the modern system of the Hindus, and in the division of the months according to solar reckoning, Çrāvana does not begin at the summer solstice: for the modern Hindu year is sidereal, and its months commence when the sun arrives at certain fixed points in the heavens, from which the equinoxes and solstices are becoming farther removed with the lapse of each successive year. The name Çrāvana, then, was first given to that lunar month, or synodical revolution of the moon, during which she was full in the asterism Çrāvana, and it might as well have been given five thousand years before Christ as twelve hundred. Bentley's calculation is not worth the paper upon which it was originally printed.

A second calculation and deduction, quoted by Prof. Müller from the same authority, possesses a somewhat greater apparent plausibility, and does not admit of being disposed of so summarily. The "ancient astronomers," Bentley discovers, assert that four of the planets were sons of four of the lunar asterisms, the spouses of the moon: namely, Mercury of Rohiṇī, Venus of Maghâ, Mars of Ashâdhâ, and Jupiter of Pûrva-Phalgunî; and that the moon, their father, was present at the birth of each. With his usual courage and enterprise, he sets himself (or sets some one else: see farther on) to find a physical explanation of the legend, and to make it yield a date. He imagines, in the first place, that the birth of a planet from an asterism in the presence of the moon will most naturally be explained by an occultation of that planet by the moon in the given asterism. In the course of the last three or four thousand years, however, the moon must have occulted each of the planets a great many times, and in all or almost all the different asterisms; hence we shall be able to derive no date from this circumstance alone.

But the attribution of such names to only four of the planets affords ground for conjecturing that occultations of these four within some limited period may have furnished the occasion of the nomenclature. By retrospective calculation, a single year appears to be found, in the course of which the moon occulted these four planets, and these only, and each of them in the asterism which is reputed to be its mother. The year is 1425–1424 B. C. During the course of it, Saturn, the only other planet, was out of the moon's way, and could not be occulted. Bentley asserts, then, not doubtfully, but with his usual confidence, and as if the truth of the matter was beyond all question, that the observations of the occultations were made, and the names given, in the year 1425–4 B. C., and he establishes this as one of the principal dates in his history of ancient Hindu astronomy.

In examining this process, I wish first to point out that it is probably not Bentley's own, but given by him at second hand. The four dates are: August 19, 1425, Venus occulted in Maghâ; April 17, 1424, Mercury occulted in Rohinî; April 23, 1424, Jupiter occulted in Pûrva-Phalgunî; August 19, 1424, Mars occulted in Pûrva-Ashâdâ: the included time is precisely a year. But, in reporting these dates, Bentley commits the almost incredible blunder of reckoning them to cover a period of sixteen months, as if the time were after Christ instead of before, and so April 17, 1424 the earliest, and August 19, 1425 the latest of them! This he does not by inadvertence merely: he repeats the statement twice, in text and note, and arranges the four dates in a corresponding order.* To my mind, this is almost conclusive proof that he did not himself make the calculation, but got it from some one else, and bungled it in the reporting. For it is perfectly evident that the gist of the calculation as made, and the force of the conclusion drawn from it, lay in no small measure in the fact of its covering just a year. If an odd time were permitted to be taken, why not eighteen months, or two years and a half, or a longer period, during which occultations in the same asterisms might be found to have taken place? And it is hard to conceive that Bentley, if the work was his own, could have forgotten this important circumstance when he came to put it in shape for publication.

In the second place, I cannot but think the whole story, as reported by Bentley, of somewhat doubtful authenticity. Not that the four planets which it concerns do not bear in Hindu usage names indicative of their birth from the several asterisms mentioned: Müller, at the end of his Preface (p. lxxxviii), is able

* That Müller copies all from him without noticing the blunder is not, perhaps, to be wondered at.

to quote authorities for them all. But whether there is on record a legend restricting the nomenclature to these four planets, and adding the distinctive circumstance that the moon was in each case present at their birth, seems more questionable. Bentley, as is his wont, gives no authority for it; Muller has evidently found none; nor had Wilson, who refers to the story and its explanation by Bentley in the notes to his *Vishnu Purāṇa* (p. 225).^{*} I have never seen any reason for believing Bentley a dishonest reporter, or capable of deliberately falsifying a citation for the purpose of making it support one of his theories; but the interposition of another between him and the original authority, which I have just shown to be with great probability assumable, notably facilitates the supposition of a tampering with the sources: we all know how easy it is for a story going through two hands—one, perhaps, a little unscrupulous, the other a little eager and credulous—to receive a dressing-up which somewhat changes its aspect. The circumstance which awakens suspicion is that, in fact, Saturn also, no less than the other planets, has a name implying his birth from a lunar asterism, namely *Revatī*. This is pointed out by Muller (p. lxxxviii†). It looks to me a little as if Bentley's friend had left Saturn out of the account because he found it an impracticable subject, and had added the trait respecting the moon's presence in order to give the more plausibility to his explanation of the names by the supposition of occultations. Still, I should not be inclined to push this suspicion too far, nor loth to be convinced of the existence of Bentley's legend in the precise form in which he reports it.

Again, occultations by the moon are not an altogether unexceptionable explanation of a legendary birth of the planets. In an occultation, as in an eclipse, the obliteration of the planet, its disappearance, is a much more striking phenomenon than its reappearance. We should expect, then, that a legend founded on occultations would speak of a death rather than a birth; or, if of a birth, then at any rate of a new birth, a regeneration. If there was aught in the story which implied a destruction and re-creation, a swallowing and disgorging, or the like, Bentley's interpretation of it would possess a much more evident plausibility. Further, we have a right to ask whether there is anything so very rare and striking in the occurrence of four occultations during the course of a single year as should naturally lead to the founding upon it of a nomenclature of the planets.

^{*} Muller is clearly in error, I think, in stating that Wilson "speaks distinctly of the legend as occurring in the *Vāyu* and *Linga Purāṇas*." Wilson says nothing at all of the legend, but only of the positions of the planets at the end of the *Cakshusha Manvantara*, as given by those authorities.

† Where, in the seventeenth line, "Saturn" is to be read for "Jupiter," as the context also plainly shows.

The question here is not whether 1425-4 B. C. is the only single year when the moon can have occulted the four planets in the asterisms which give them their names; this might readily be granted to Bentley's claim, but would only serve to fix the year, supposing the interpretation of the legend to be indisputably correct: when we are testing the character and value of the interpretation itself, we must also inquire whether there may not have been other years when the moon has occulted four planets, or three, or five, in other parts of the heavens, and when, accordingly, a planetary nomenclature would have been equally likely to be suggested. The occultation of a brilliant planet by the moon is a beautiful phenomenon, likely to attract the attention of a people given to assiduous contemplation of the heavens, and accustomed to watch the planetary motions and aspects; a succession of four phenomena of the kind within a limited period, as a year, would be yet more striking to such a people; but if this may happen several times in the course of two or three thousand years—and, though unable to speak with authority upon the subject, I should certainly think it might—then no people could be pronounced likely to select one case from among the many, and to make it alone the basis of a planetary nomenclature. To render such a supposition plausible, we should at least require some independent evidence going to show that the names possessed about the antiquity which it would imply. But, far from this, we have the very best reason for believing that the Hindus had not taken any notice of the planets at all down to a time fifteen centuries, and more, later than that which Bentley's calculation would assign to the names here in question. This important fact, that the first mention of the lesser planets is in India contemporaneous with traces of Western astronomical science, has been more than once referred to in the preceding pages, and its bearing upon such speculations as these of Bentley's is of the most decisive and crushing kind. He who, in the face of it, would prove that the Hindus gave to the planets a certain series of appellations more than fourteen centuries before Christ, must do it by something more convincing than a doubtful interpretation of a modern Puranic legend.

It may be asked whether, if Bentley's explanation be set aside as unsatisfactory, any other can be found which shall be less liable to objection. I answer, yes: such an explanation has been derived by Prof. Müller himself from Wilson's notes to the Vishnu Purāṇa. The fact has already been noticed that Saturn, like the other planets, has an asterismal name, being denominated "son of Revatī." For Mercury, two such metonymies are found in the Hindu lexica: he is styled "son of Çravishthâ," as well as "son of Rohiṇī." The moon's ascending and descending nodes have appellations of the same character:

they are called sons of Bharanî and of Âçleshâ, respectively. Of this class of designations, then, we have eight, six for the five planets, and two for the moon's nodes. Now no less than six of the eight, including two of those which Bentley professes to account for, are explained by the positions which the heavenly bodies bearing them are by certain of the Purâṇas declared to have occupied, at an epoch which they call the Great Equinox, and which the Vâyu Purâṇa states to be the end of the Patriarchate (*manvantara*) of the Manu Cākshusha (see Wilson's *Rigveda*, p. 225, note). This Patriarchate directly preceded the present one, which is that of the Manu Vâivasvata, and began about a hundred and twenty million years ago (see *Sūrya-Siddhānta*, i. 18-23, and notes). The Hindu conception apparently was that the end of the former order of things and beginning of the present was an era so important in the history of our world that it constituted a regeneration; and that the planets might be regarded as born, for us, each from that region of the sky which it then occupied. That this explanation is far preferable to Bentley's, for the names to which it applies, on account both of its including a larger number of them and its greater inherent plausibility, is to me very obvious. And the probability is of the strongest that the two appellations, which it does not cover will yet be satisfactorily accounted for in a similar manner.*

In view of all these difficulties and objections, I maintain, with much confidence, that Bentley's explanation must be pronounced a failure: the probability that four occultations, happening in the year 1425-4 B. C., suggested four of the Puranic names of the planets, is very small indeed, compared with the probability that those names had another origin, and that their correspondence with the moon's occultations in the year designated, if such correspondence there be, is only a curious accident.

I say, if such correspondence there be; for it must not fail to be observed that, even without testing Bentley's processes by a re-calculation, we may note sundry considerations which cast a

* There is something unaccountably strange in the Puranic definition of the positions of Mercury and Venus at this important epoch: how Mercury can be, even by a Hindu cosmogonist, placed in *Çravishthâ* when Venus is put in *Pu-hya*, at least $146^{\circ} 40'$ distant from him; or how either can receive such location when the sun is made to stand in *Viçākhâ*, at least $93^{\circ} 20'$ from Venus, and at least 80° from Mercury, it is hard enough to see. The furthest distance from the sun actually attained by Venus is about 48° ; by Mercury, 29° , so that they can never actually be more than 77° apart: nor are the greatest elongations of the two planets, as determined by the modern Hindu astronomy, very different from these. It looks as if the defined positions of the planets at the Great Equinox were mere guess-work, and the work, too, of a very unlearned and blundering guesser, rather than found by retrospective calculation. The putting of the moon's nodes, also, in *Bharanî* and *Âçleshâ*—or, at the utmost, only $106^{\circ} 40'$ apart—is a yet grosser error of the same character.

strong shade of doubt over their validity. It is greatly to be questioned whether the astronomical science of Bentley's time knew the movements of the moon and lesser planets with sufficient accuracy to be able to determine with confidence, at a distance in the past of more than three thousand years, the fact of an occultation as visible in a particular country at a particular time—if, indeed, the astronomy of our own day is equal to so delicate an operation. Moreover, an occultation of Mercury, which has to be effected so near the sun, generally in the strong twilight, and by a moon of which scarce a rim is to be seen, must require such a combination of favorable circumstances to make it visible with the naked eye, that he who asserts the phenomenon to have been seen in India in the year 1424 B. C. should be called upon, under penalty of disbelief of his assertion, to show that its conditions were such as to render the sight possible without aid from the telescope. Bentley's calculations concern matters of such difficulty, and the results they yield are so baldly stated, that the accuracy of the former and the conclusive force of the latter are alike open to just suspicion. And this is all we need to fortify us in our conclusion, already pretty well established by other evidence, that his whole interpretation is too weak to sustain itself, and must be rejected as valueless.

Thanks to Prof. Müller, however, we are not left only to this critical balancing of seemingly opposite probabilities. He has done us the service of moving competent astronomical authority to test the accuracy of Bentley's calculations, and with the most satisfactory results. Mr. Hind, of the British Nautical Almanac Office, has performed over again the whole process, with the aid of the best modern tables, and has found that "Jupiter is the only planet that could have been occulted." On or about the dates at which Bentley claims the other occultations to have taken place, the moon passed the three other planets in conjunction: Venus, at the distance of a little less than two degrees, which was a near approach; but Mercury and Mars, at a removal in latitude of not less than six and a half and seven degrees respectively. This, of course, utterly annihilates Bentley's chronological deduction. To give the latter even the faint shadow of possibility which at the best belongs to it, we must positively have occultations. The supposition that the Hindus of 1424 B. C. would have thought of deriving a nomenclature for the planets from the fact of the moon's approach to them, in the course of a single year, within distances varying from half a degree (with perhaps an occultation in this case*) up to seven

* Which Mr. Hind, however, if I rightly understand his figures, makes to have happened an hour or two before sunset in India, so that it could not have been seen there.

degrees, is so devoid of plausibility that it does not merit an instant's consideration. Passing strange is it, however, that Müller himself does not see this. After presenting Mr. Hind's figures, he says (p. lxxxvii): "It will thus be seen that the statement of Bentley as to the dates of the four conjunctions of the moon and the planets is fully borne out by Mr. Hind's calculations, and that the coincidence between the legend quoted by Bentley and the astronomical facts determined by Mr. Hind is a real one." As if Bentley had said anything about "conjunctions;" and as if a conjectural explanation of a legend which absolutely requires occultations to support it, and cannot quite stand even then, could be bolstered up with conjunctions! Bentley himself knew too much of astronomy ever to have thought of maintaining such an absurdity. Suppose that we had a Puranic legend which admitted, with a good deal of doubt, of interpretation as founded upon a total eclipse of the sun in a certain asterism, visible in India; and that some venturesome interpreter had so explained it, and had, by calculating the eclipse, assigned it a certain date; and suppose that some much more competent astronomer, on revising the calculation, had found that the eclipse, after all, was not total, nor visible in India; that, in fact, there was no eclipse at all; but that, on the day claimed, the moon did actually pass the sun, at the given point in the heavens, at the distance of two or three degrees from it: should we think this a confirmation of the first interpreter's work? Even Prof. Müller, I presume, would not so regard it; and yet, the case is closely analogous with that which he sets before us. The alternative, then, which he finally proposes for our choice—namely, that we either allow the modern Hindus to have been able to determine the four occultations by retrospective calculation, or confess the observation a real one, and handed down by tradition through tens of centuries—is one with which we decline to embarrass ourselves: we reject both parts of it, as equally baseless and unnecessary. Prof. Müller is entitled to our gratitude for having drawn out from Mr. Hind the calculations which overthrow Bentley's pretended date, but he needs to excuse himself for attempting to persuade us that they strengthen and establish it.

In the light of these two exploded hypotheses of Bentley, touching the nomenclature of the months and of the planets, we shall see more clearly in what manner to treat a third similar figment of his, also cited by Müller as "deserving of attention." Bentley interprets the name of the asterism *Viçâkhâ* as meaning 'divided into two branches or portions,' and declares (putting, as usual, his conjecture in the form of a dogmatic assertion) that it was given to the asterism on account of the latter's being parted exactly through the middle by the equinoctial colure; and as

the colure was in position to do so about 1426 B. C., he establishes this as the date of first formation of the system of asterisms. The sufficient answer to this is, that it is the merest etymological conceit, unsupported by a particle of evidence of any kind. It is of no more value than the assertion of the same author that Mûla once led the series of asterisms, because the word *mûla* means 'root,' and that, at another period, Jyeshthâ stood at their head, because *jyeshthâ* signifies 'oldest.' It is even less plausible: for, in the first place, the most ancient name of the asterism is a dual—*viçâkhe*, 'the two Viçâkhâs'—which proves it to belong, not to the space in the sky defined by the asterism, but to the two stars which compose the group; and, in the second place, the idea that the Hindus, at the period when they selected and named their asterisms, as the first preliminary step (so Bentley describes it) to astronomical observation and reasoning, should have conceived of an equinoctial colure as cutting one of the series in two, and given it an appellation from this circumstance, possesses an incongruity which is almost ludicrous.

I am of opinion, then, that Müller has done a positive disservice to Hindu archæology by his partial rehabilitation of Bentley, in bringing him up to notice anew as an authority worthy of consideration and study, and from whom valuable results may be drawn. If the counter-reasonings given above are sound, we see that all his chosen specimens of Bentley's work are worthless, and that to him, as to others, this author has been a reed which, when leaned upon, has broken and pierced his hand. May we not hope that, if convinced of his error, he will at some suitable opportunity publicly express himself to that effect, and withdraw the partial endorsement he has given, since my voice will reach not a tithe of those who listen with deference to his declared opinions.

I will notice but a single other matter in Prof. Müller's Preface, and one concerning not so much himself, as Colebrooke, from whom he takes it. From Colebrooke's Notes and Illustrations to his Hindu Algebra (Essays, ii. 463), he cites (p. xiv., note) a determination of the age of Brahmagupta upon astronomical evidence. Colebrooke, as is universally known, was a most sound and careful writer, and even his conjectures and crudely formed views upon matters which he was unpossessed of the means of fully judging are always respectable, and, not seldom, intuitive perceptions of the truth as it is later made clearly to appear. But he was not infallible, and our author's quotation gives us one of the most serious of the few errors into which he has fallen. He infers the period of Brahmagupta from an examination of the longitudes of two among the junction-stars

of the asterisms, as reported by that astronomer. But Brahmagupta's definition of position of the junction-stars is not different from that which is given by the other astronomical authorities; the slight variations which are to be discovered in the separate accounts are in no degree indicative of independent observation on the part of their authors. So far as there is any evidence before us, we are justified in believing that a single determination of the *dhruvaka* and *vikshepa*, the 'polar longitude' and 'polar latitude,' of these twenty-eight stars, and of half a dozen of the fixed stars not included in the lunar asterisms, made about the year 500 of our era, was the one grand effort, never repeated and never rivalled, of the Hindu astronomy as a science of observation: its results were copied, with occasional slight and unexplained modifications, from author to author, from century to century. The conclusion to be drawn from such calculations as Colebrooke's, then, can only be the date of the observation, and not that of any single authority who reports it: unless Brahmagupta can be shown to be the original observer, or the first reporter—a thing which no one has attempted, and which is very unlikely ever to be done—Colebrooke has no more fixed his period than that, for instance, of the *Sûrya-Siddhânta*, or of the *Graha-Lâghava*. This objection, indeed, is urged by Bentley in the concluding Section of his *Hindu Astronomy*, and constitutes one of the exceedingly few points with regard to which he was in the right, in his repeated and virulent attacks upon Colebrooke: the latter has in vain attempted to turn the force of it in his reply, communicated to the *Asiatic Journal* in 1826.*

* *Asiatic Journal and Monthly Register for British India and its Dependencies*. Vol. xxi., London, 1826. p. 360 etc.

ARTICLE II.

ON THE TESAVUF, OR SPIRITUAL LIFE OF THE SOFFEES.*

TRANSLATED FROM THE TURKISH OF MOHEMMED MISSIREE,

BY JOHN P. BROWN, Esq.,

OF THE AMERICAN EMBASSY AT CONSTANTINOPLE.

Presented to the Society May 21st, 1863.

NOTE BY THE TRANSLATOR.

THE word *صوف*, *soof*, signifies in Arabic 'wool,' and Mr. Lane, in his 102d note on the 10th chapter of the Arabian Nights, says that the so-called *Soofees* derive their title either from their wearing woollen garments, or from the Greek word *σοφός*, because of their philosophical tenets. He adds, that "there is an order of Muslim darweeshes called *Soofees* 'who make profession of a more regular and more contemplative life than darweeshes in general; and many of this class have written books of spirituality, of devotion, and of contemplation, which mostly bear the title of "Tasowwuf," that is, of spiritual life.' . . . The Sunnee *Soofees* are in a great degree mystical and latitudinarian; but not so much so as the *Soofees* of the Persian sect."

In all the *tekkehs*, or convents, of the various Dervish sects which I have visited, the members sit on sheep-skins, called *pastakees*. Many also wear white felt caps made of wool, and even their cloaks are of an uncolored stuff of the same material.

The Order of the *Bektashees*, which was intimately connected with the *Yanitcherees*, wear white felt caps, and believe in the *tenassuh*, a system of metempsychosis.

* In a letter accompanying this paper, Mr. Brown protests against any alteration of his transcriptions of Arabic and Persian words, and we accordingly allow his orthography to stand unchanged, merely making it occasionally more consistent with itself. It appears to be controlled by Turkish euphony.—COMM. OF PUBL.

TRANSLATION.

A few remarks on the subject of the *tesavuf* (lit., profession of Soffeeism, or spiritual life), by the learned and pious Mohemmed Missiree—may his precious grave be blessed!

In the name of the Clement and Merciful God.

Praise be to the Lord of the Universe (lit., the present and future world). Prayers and Peace [from his people] be upon our *Sayd* (Lord) Mohemmed [the Prophet], and Ali [his cousin and son-in-law], and all other prophets, and the family and *Ashabs* (Companions) of Mohemmed.

[*Question.*].—Should any person ask what is the beginning of the *tesavuf*, the answer is:

[*Answer.*].—Faith, which has six columns, to wit: "The Existence of God," "His Unity," "the Angels," "the Prophets," "the Day of Resurrection," and "Good and Evil through His Predestination"—all of which are to be spoken with the tongue, and acknowledged with the heart.

[*Q.*].—What is the conclusion and end of the *tesavuf*?

[*A.*].—It is the pronouncing with the tongue of faith the six preceding columns, and the confirming of them with the heart, as was said by Junaydee, in answer to an interrogation on the subject of the end of the *tesavuf*.

[*Q.*].—What is the distinction between the *soffa* (lit., the clarified) and common people?

[*A.*].—The knowledge [which is the foundation] of the faith of the latter is only an imitation of these six columns, whilst the faith of the *soffa* is the true, as is shown by the evidences of the *ulema i uzama* (doctors of the sects).

[*Q.*].—In what does this imitation consist?

[*A.*].—This imitation is what has been learned from their fathers, the *inaams* (preachers) of the quarters in which they live, or from one of the *ulema*, and so believed; but they do not know why it has become a fundamental rule to believe in these Columns of Faith, nor how salvation is obtained thereby. It is not known that, whilst walking in the public streets, one has found a jewel which many sovereigns sought after unsuccessfully—conquering the world from one end to the other, and finding every thing else but it. He who has found it, has found a light brighter than the sun, when it obscures the lesser lustre of the moon, and found an alchemy which converts copper of a thousand years old into pure gold. The finder, however, knows not its real value, and considers it only as a false jewel, which its possessor, if thirsty, might give away for a drink of water.

[*Q.*].—What is the proof of faith?

[A.]—The proof consists in a search made for the origin of each of the six columns above named, and one's arrival at the truth (*hakkikat*). The *ilm i tarikat* (science of the sects) is the distinctive path existing between a *taklid* village and a *taklid* city [i. e. only leads from one authority to another]. Many persons follow on that pathway for ten, others for twenty, others thirty, others forty years, wandering away from the truth, and entering each upon a different road of error. Some become *Ehlee Jebree* (persons who believe that God compels each action of man, and leaves no room for free will); some become *Ehlee Kaderec* (persons who hold that man has power to do good and evil); others are *Ehlee Mutazellee*; some again become *Mujessemmees* (Anthropomorphists); and others, *Mushebbakees* (those who define the appearance of God, by portraits, or otherwise). There are, in all, seventy-three ways or sects; each one following one of these wanders off, without ever arriving at the city of the true faith; only one of these seventy-three parties is in the right, called the *Firkat Najieh* (Party of Salvation), and it is those alone who follow this way that reach the proper goal. Through their perfect subjection to the directions of the blessed Prophet, these know the real value of the jewel found by them. Their faith is manifest; and whilst proceeding, as it were, with a lamp, they have reached the sun. Though at first only imitators, they have finally found the truth. After finding the true faith, they turn their attention to the imitation (or semblance), and familiarize themselves with its interior. They find that the *tarikats* (paths of the Dervishes) and the *sheryats* (laws of Islam) are coincident. They have as yet only received sufficient inspiration from God to enable them to see the truth, which is hidden from those who still wander in the path of imitation. Comparing the two with each other, they consider them as being like the soul and the body, according to the words of the blessed Prophet: "Whoever is deficient in one of his faculties, is deficient in one of his parts," from which it is clear that whoever is deficient in the *sheryat* cannot be perfect in the *hakkikat*.

[Q.]—In matters of faith, and forms of worship, to what sect are the *soffa* attached?

[A.]—Most of them are of the Muslim faith, and of the sect of the *Ehlee Sunneh* (those who observe the traditionary precepts of the blessed Prophet), and accept the *jemaat* (prescribed forms of public prayer), according to the *mezheb* (creed) of the celebrated Sheikh Abu Mansur Matureedee. Most of the Arabs are of the creed of the Sheikh Abul Hassan el Esharee, and are *Ehlee Sunneh*, and accept the *jemaat*, as understood and practised in conformity with one or other of the four Rites, adopted in the country to which they belong (i. e., either the *Haniffee*, *Hanballee*, *Shafee*, or *Malekee*). For instance, those of

the country of Room are *Haniffes*, so called from Abu Hanif-
feh, who derived his articles of faith from the Koran and the
hadisat (traditional sayings) of the blessed Prophet; those in
Arabia, Egypt, and Aleppo, as well as in the two holy cities,
are *Shâfees*; all the people of Tunis and Morocco, and as far
as Andalusia, as well as some in Arabia, are *Malekees*; most of
the people of Bagdad, Iraak, and a part of Arabia, with some
of the inhabitants of the holy cities, follow the Hanballee
Imaam. There are some differences between these, but only
such as refer to forms of worship; as regards dogmas they all
agree. The blessed Prophet designated those who observe the
sunnah and *jemâat* by the title of *Ehlee Vajah* (the Saved), and
these four are all of this kind. All the *soffis* belong to the
Ehlee Vajah. It is a point of belief among the *soffis* that it is
not for every one who is of the *Ehlee Allah*, or a *keramat sa-
hibee* (i. e., either a believer in the Divinity, or particularly gifted
by the Divinity), to attain to the character of sanctity belonging
to the four great doctors of the holy law, much less to that of
one of the *Ehlee Kuzeen* (the Twelve Imaams). The only means
of arriving at their degrees of perfection would be to follow
their creed until one surpassed it, and then to establish, by God's
sanction, a new one superior to theirs—which, as yet, no one
has ever been able to do.

[Q.]—When Bayazid el Bestamee was asked of what sect he
was, he replied: I am of the sect of Allah. What did he mean
by this answer?

[A.]—All of the sects of Allah are those just mentioned.
They are called [for example] the sects of the Greater Imaam
(Numan ibin Sabit el Kuffee) and of the Shâfee Imaam, but
are, in reality, sects of Allah; and so Bayazid spoke truly when
he said he was of His sect.

[Q.]—Most of the *Soffees*, in their *kassidehs*, use certain words
which we hear and understand as showing that they were of the
Ehlee Tenassuh (Metempsychosians). They say: I am some-
times Lot, sometimes Rayu, sometimes a vegetable, sometimes
an animal, at other times a man. What does this mean?

[A.]—Brother! the blessed Prophet has said: "My people,
in the eternal life, will rise up in companies"—that is, some as
monkeys, others as hogs, or in other forms—as is written in a
verse of the Koran (ch. 78, v. 18) which has been commented
on by Kazei Beyzavee (this commentator cites a tradition to
the effect that, at the resurrection, men will rise up in the form
of those animals whose chief characteristics resemble their own
ruling passions of life: the greedy, avaricious man, as a hog;
the angry, passionate man, as a camel; the tale-bearer, or mis-
chief-maker, as a monkey); because, though these men, while
in this life, bore the human form externally, they were, inter-

nally, nothing different from the animals whose characters are in common with their own. The resemblance is not manifest during one's life, but becomes so in the other existence, after the resurrection. Let us avoid such traits; repentance before death will free any one from these evils. The blessed Prophet said with regard to this: "Sleep is the brother of Death" (النوم أخ الموت). The dying man sees himself in his true character, and so knows whether or not he is, by repentance, freed from his ruling passion of life. In like manner, he will see himself during his slumbers, still following in the path of his passion. For instance, the money-calculator, in sleep, sees himself engaged in his all-absorbing occupation; and this fact is a warning from God, not to allow himself to be absorbed in any animal passion, or degrading occupation. It is only by prayerful repentance that any one can hope to see himself, in his sleep, delivered from his ruling carnal passion, and restored to his proper human, intellectual form. If, in your slumbers, you see a monkey, consider it as a warning to abandon, or abstain from, the passion of mischief; if a hog, cease to seize upon the goods of others; and so on. Go and give yourself up to an upright *murshid* (spiritual guide), who will, through his prayers, show you, in your slumbers, the evil parts of your character, until, one by one, they have passed away, and have been replaced by good ones—all through the power of the name of God, whom he will instruct you to invoke: at length you will only see, in your slumbers, the forms of holy and pious men, in testimony of that degree of piety to which you will have attained.

This is what is meant by that expression of certain poets, referring to one's condition previous to the act of repentance, when the writer says: I am sometimes an animal, sometimes a vegetable, sometimes a man; and the same may be said by the *Soffees*, in application to themselves, of any other part of creation, for man is called the *akher i mevjudat* (the climax of beings): in him are comprised all the characteristics of creation. Many mystical books have been written on this subject, all showing that man is the *nuhai kubra* (the larger part), and the world, the *nuhai sogra* (the smaller part), of God's creation. The human frame is said to comprise all the other parts of creation; and the heart* of man is supposed to be even more comprehensive than the rainbow, because, when the eyes are closed, the mental capacity can take in the whole of a vast city: though not seen by the eyes, it is seen by the capacious nature of the heart. Among such books is the *Haouz el Hayat* (Well of Life), which says that, if a man closes his eyes, ears, and nostrils, he

* Orientals consider the heart as the seat of mental capacity; and the liver, of the affections.—Ta.

cannot take cold; that the right nostril is called the sun, and the left the moon; that from the former he breathes heat, and from the latter cold air. There is also a treatise entitled *Nuskhah Kubra*, wholly on the subject of the superiority of man, which is one of the favorite works of the *Soffees*.

[Q.]—Explain the distinctive opinions (*mezhebs*) of believers in the *tenassuh*, and of the *Soffees*.

[A.]—We say that this system of metempsychosis has nothing to do with the *barzakh* (a name given to the intermediate period between death and the resurrection, mentioned in the 23d chapter of the Koran, 102d verse, in which departed souls receive neither rewards nor punishments: here, however, it means only a state of total indifference to all future life, into which some men fall in consequence of the vicious nature of their lives, or their spiritual demoralization). It is believed to be operative in eternity, or in the future state; it is declared, that it does not exist in the present life. For example, it is said that some men take the character of certain animals, not their forms, and that, when they die, their souls enter the bodies of such animals as they already resembled in character, and so, by natural propagation, they become the animals themselves, visible to the eye, and never again really die, or cease to exist in this world. In this manner, mankind leave the human form, and become, in turn, various animals, either through natural propagation, or by one animal devouring another, perpetually. Such is the belief of the Metempsychosians, and it is wholly inconsistent with the true faith. On this point Omar ibn al Farid has said: "He who believes in transformation and transmigration stands in need of God's healing—keep thyself far removed from his belief!"

(ومن قابل بالنسج والمسج واقع به ابراء وكن عما براه بعزلته)

O brother, keep far from such a belief, and have no connection with it. Of the seventy-two erring sects, before alluded to, this is the worst. God preserve us, in this life and the one to come, from participating with, or even beholding, such sectaries!

[Q.]—These persons regard certain things as legally proper, which are forbidden. For instance, they command the use of wine, wine-shops, the wine-cup, sweethearts; they speak of the curls of their mistresses, the moles on their faces, cheeks, etc.; and compare the furrows on their brows to verses of the Koran. What does this mean?

[A.]—Just as these *Soffees* leave the true faith for its semblance, so they also exchange the external features of all things for the internal (the corporeal for the spiritual), and give an imaginary signification to outward forms. They behold objects of a precious nature in their natural character, and for this reason

the greater part of their words have a spiritual and visionary meaning. For instance, when, like Hafiz, they mention wine, they mean a knowledge of God, which, extensively considered, is the love of God. Wine, viewed extensively, is also love: love and affection are here the same thing. The wine-shop, with them, means the *murshid i kiamil* (spiritual director), for his heart is said to be the depository of the love of God; the wine-cup is the *telkin* (the pronunciation of the name of God, in a declaration of faith, as: There is no God but Allah), or it signifies the words which flow from the *murshid's* mouth respecting divine knowledge, and which, heard by the *sâlik* (the Dervish, or one who pursues the true path) intoxicates his soul, and divests his mind (of passions), giving him pure spiritual delight. The sweetheart means the excellent preceptor, because, when any one sees his beloved, he admires her perfect proportions, with a heart full of love: the Dervish beholds the secret knowledge of God which fills the heart of his spiritual preceptor (*murshid*), and through it receives a similar inspiration, and acquires a full perception of all that he possesses, just as the pupil learns from his master. As the lover delights in the presence of his sweetheart, so the Dervish rejoices in the company of his beloved preceptor. The sweetheart is the object of a worldly affection; but the preceptor, of a spiritual attachment. The curls, or ringlets, of the beloved are the grateful praises of the preceptor, tending to bind the affections of the Dervish-pupil; the moles on her face signify that when the pupil, at times, beholds the total absence of all worldly wants on the part of the preceptor, he also abandons all the desires of both worlds—he perhaps even goes so far as to desire nothing else in life than his preceptor; the furrows on the brow of the beloved one, which they compare to [verses of] the Koran, mean the light of the heart of the *murshid*: they are compared to verses of the Koran, because the attributes of God, in accordance with the injunction of the Prophet: “Be ye endued with divine qualities” (تتخلعوا باخلاق الله), are possessed by the sheikh (or *murshid*).*

[Q.]—The *murshid* and other Dervishes say: We see God. Is it possible for any other than the Prophet to see God?

[A.]—It is not possible. What they mean by this assertion is that they know God, that they see His power; for it is forbidden to mortal eyes to behold Him, as is declared in the Koran (ch. 6, v. 103): “No sight reaches Him: He reaches the

* During the wars between Ali and Muavieh, the latter, on being once beaten, elevated the Koran on a lance, and begged for mercy. On this being reported to Ali, he declared that he himself was the living and the speaking Koran, whilst the one raised upon the lance of his enemy was only a painted, or imitated one.

sight—the Subtle, the Knowing.” The blessed Prophet commanded: “Adore God, as thou wouldst didst thou see him; for, if thou dost not see Him, He sees thee” (اعبد الله كأنك تراه) (فان لم تك تراه فانك يراك). This permission to adore Him is a divine favor, and they say that they are God’s servants by divine favor. The blessed Ali said: “Should the veil fall from my eyes, how would God visit me in truth!” (لو كشف الغطاء ما) (ازورت يقينا). This saying confirms that no one really sees God, that even the sainted Ali never saw Him.

[Q.]—Can it possibly be erroneous to say that, by seeing the traces of any one, he may be beheld?

[A.]—One may certainly be thus seen. When any person sees the brightness of the sun, he may safely say that he has seen the sun, though indeed he has not really seen it. There is another example, namely: should you hold a mirror in your hand, you see a figure in it, and you may therefore say that you see your own face, which is really an impossibility, for no one has ever seen his own face, and you have asserted what is not strictly correct.

[Q.]—Since every one sees the traces of God, as every one is able to do, how is it that the Dervishes declare that they only see Him?

[A.]—Those who make this statement do not know what they see, and have never really seen Him. A person who has eaten of a sweet and savory dish, given to him, but of which he knows not the name, seeks for it again with a longing desire after it, and thus wanders about in search of what has given him so much delight, ignorant of what it is. So are those who seek after God, without knowing Him, or what He is.

[Q.]—Some Dervishes declare: We are neither afraid of Hell, nor do we desire Heaven—a saying which must be blasphemous. How is this?

[A.]—They do not really mean that they do not fear Hell, and that they do not wish for Heaven. If they really meant this, it would be blasphemous. Their meaning is not as they express themselves; probably they wish to say: O Lord, Thou who createdst us, and madest us what we are, Thou hast not made us because we help Thy working; we are therefore in duty bound to serve Thee all the more devotedly, wholly in obedience to Thy holy will; we have no bargaining with Thee, and we do not adore Thee with the view of gaining thereby either Heaven or Hell. “God has bought the goods and persons of the Faithful, and given them Paradise in return” (ch. 9, v. 112, of the Koran), which signifies that His bounty has no bounds, His mercy no end; and thus it is that He benefits His faithful servants. They would say: Thou hast no bargaining with any

one; our devotion is from the purity of our hearts, and is for love of Thee only. Were there no Heaven, nor any Hell, it would still be our duty to adore Thee. To Thee belongs the perfect right to put us either in Heaven or in Hell, and may Thy commands be executed agreeably to Thy blessed will! If Thou puttest us in Heaven, it is through Thine excellence, not on account of our devotion; if Thou puttest us in Hell, it is from out of Thy great justice, and not from any arbitrary decision on Thy part; so be it forever and forever! This is the true meaning of the *Soffees*, when they say as before stated.

[Q.]—Thou saidst that there is no conflict between the *sheryat* and the *hakkikat*, and nothing in the latter inconsistent with the former; and yet these two are distinguished from one another by a something which the *Ehlee Hakkikat* (Believers in the Truth) conceal. Were there nothing conflicting, why should it be thus hidden?

[A.]—If it be concealed, it is not because there is a contrariety to the *sheryat*, but only because the thing is contrary to the human mind: its definition is subtle, and not understood by every one, for which reason the blessed Prophet said: "Speak to men according to their mental capacities" (كلموا الناس على قدر عقولهم), for, if you speak all things to all men, some cannot understand you, and so fall into error. The *Soffees* therefore hide some things conformably with this precept.

[Q.]—Should any one not know the science which is known to the *Soffees*, and still do what the *sheryat* plainly command, and be satisfied therewith, would his faith (*imân*) and *islam* be less than that of the *Soffees*?

[A.]—No. He would not be inferior to the *Soffees*; his faith and *islam* would be equal even to that of the prophets, because faith and *islam* are a jewel which admits of no division or separation into parts, and can neither be increased nor diminished, just as the portion of the sun enjoyed by a sovereign and by a *fakir* is the same, or as the limbs of the poor and the rich are equal in number: just as the members of the body of the sovereign and the subject are precisely alike, so is the faith of the *Ehlee Islam* the same in all and common to all, neither greater nor less in any case.

[Q.]—Some men are prophets, saints, pure ones, and others *fassiks* (who know God, but perform none of His commands); what difference is there among them?

[A.]—The difference lies in their *marifeh* (knowledge of spiritual things), but in the matter of faith they are all equal: just as, in the case of the sovereign and the subject, their limbs are all equal, while they differ in their dress, power and office. As to the humanity of men, that depends upon their dress of knowledge, and their spiritual power; in these only are they men, and

not simply animals. The character of the sovereign does not depend upon his humanity, which is the same as that of all other men, but upon his office and rank.

NOTE BY THE COMMITTEE OF PUBLICATION.

It may not be amiss for us to indicate some bearings of this communication upon one of the later publications, touching the same subject, which have preceded it.

1. Schmolders, in his *Essai sur les Écoles Philos. chez les Arabes*, lays stress upon the point that Sûfism is neither a philosophical system nor the creed of a religious sect, but simply a way of living: this view is confirmed, not only by the express statements of our Turkish author, but also by the tone of his answers to supposed inquiries—showing that, while not, himself, one of the Sûfis, he yet regarded them as, in general, fellow-believers.

2. The same writer, however, recognizes one exception to the foregoing, namely, in the profession of belief in transfiguration by a limited number among the Sûfis, chiefly in Persia, with whom the community at large are often, as he says, erroneously confounded: this also is illustrated by Mr. Brown's paper.

We add a few words respecting the origin of Sûfism, and those quoted from one of the earliest books on the subject, Tholuck's *Sufismus* (1821), which are still instructive and interesting. After remarking upon traces of the elements of this manner of religious life in the first century of the Hijrah, Tholuck places the origin of Sûfism, properly so called, in the following century, and says: "Hoc eodem saeculo, dum omnia saevo tumultu miscebantur, et dubitatio de religionis veritate multorum implebat simulatque conturbabat animos, mysticismus, ut fieri solet et alias, magis magisque in constantiorum pectora sese insinuans permagnam patronum copiam nactus est, longe lateque ramis suis emissis. Surrexerant in ordinibus diversissimis viri conscientiae impetu concitati, qui relictæ priori vitae consuetudine ad id solum negotium incumberent, ut fervidum divinarum rerum atque religiositatis studium civibus suis commendarent, nec praeceptis tantum sed vitae exemplo, quid amor posset divinus, ostenderent" (pp. 55-6).

This communication is understood to be an extract from an extended work on Muslim mysticism, on which Mr. Brown has been engaged for some years, and which is now almost finished.

ARTICLE III

MATERIALS FOR THE HISTORY OF THE MUHAMMADAN DOCTRINE OF PREDESTINATION AND FREE WILL: COMPILED FROM ORIGINAL SOURCES. By EDWARD E. SALISBURY.

Presented to the Society May 20th, 1863.

THIS collection of materials for the history of opinion, in the Muhammadan world, as to the relations between divine sovereignty and human freedom, is presented to the Oriental Society with full consciousness of its incompleteness and want of a more thorough elaboration. But the interest of the subject may, perhaps, be relied upon to make up for all imperfections in the presentation of it; and the more, as it is not known that any one has as yet treated the subject specially, in the way now proposed. My plan is first to bring together some of those expressions of the lyric muse of the Arabs, either uttered before the time of Muhammad or early post-islamic, effusions of grief or vauntings of heroic ardor, which indicate the direction of the Arab mind, at that early period, with respect to the two opposite phases of belief based upon the consciousness of personal human efficiency, on the one hand, and the persuasion of a superhuman overruling power, on the other. I will then endeavor to show, somewhat in detail, though not exhaustively, the teachings of the Kurân, and the opinions of Muhammad as handed down by tradition, on the subject of predestination. The last part of my paper will be given to the presentation of various opinions to which Muslim theologians and philosophers were led, when the same great theme was revolved and labored over by them, under the inspiration of fresh scientific ardor.

1. Judging from remains of the most ancient poetry of the Arabs, their inmost souls, in "the age of ignorance," gave back no reflection of dreaded or devoutly worshipped divine power. Though they had their named deities, whose images were set up in the Ka'bah, and practised sacrificial rites, yet it is evident that they were not animated by the spirit of religious reverence: when most conscious of human feebleness, they seem not to have entertained any notion of being in the hands of a divinity, or divinities, whom they might propitiate by service and offerings, but to have given themselves up to the undefined apprehension of an irresistible, blind fatality. The early Arab popular poetry differs, therefore, widely in its spirit from that of most other nations in a corresponding stage of progress: for, in general, the nearer we approach to the fountains of national literature, the more distinctly do we see the powers of heaven reflected in that current of feeling which reveals itself in popular songs. Yet the ancient Arabs were not unimaginative—far otherwise, they were delicately sensitive to those impressions of natural phenomena from which mythologies have been wont to originate. Their hardy nomadic life, with its struggles and vicissitudes, was, perhaps, a bar to that meditative pondering on the appearances of nature which might have imparted to them a spiritual significance, making them emblems and manifestations of supernatural being. It may be, also, that what is here referred to had to do with a certain race-tendency to the abstract, in the conception of divine existence, which a distinguished orientalist,* whose way of dealing with the supposed fact I cannot accord with, thinks to have discovered among the Shemites—the individualizing of the notion of superhuman power having been thereby restricted. But what concerns us most is the presentation of evidence of the fact that the early Arabs were fatalists, not the explanation of it. Hear, then, Zuhair, in his Mu'allakah, saying:†

رَأَيْتُ الْعَمَيَّاءَ خَبَطَ عَشَوَاءَ مِنْ تَصَبَّ تَمَمَهُ وَمِنْ تَخَلَّطَى بَعَثَ فِيهِمْ

"Fate, to me, is like a stumbling, eyeless camel—

Whom it hits it kills, whom it misses lives and grows old;"

and Tarafah, author of another of the seven poems, who says:‡

أَلَا إِيَّاهَا ذَا اللَّائِمِي أَحْضَرَ الْوَعَى وَأَنْ أَشْهَدُ الذَّاتِ هَلْ أَنْتَ مَحْلَدِي
فَإِنْ كُنْتُ لَا تَسْتَطِيعُ دَفْعَ مَنِّيْنِي فِدَعْنِي أَبَادَهَا بِمَا مَلَكَتْ بَدِي

* Renan, in his *Nouvelles Considérations sur le Caractère Général des Peuples Sémitiques, et en particulier sur leur Tendance au Monothéisme*. Paris, 1859.

† v. 49, ed. Arnold.

‡ vv. 56, 57.

"O whoever blames me for presence in the fight,
And that I join in pleasures, canst thou make me immortal?
But, art thou powerless to repel my fate,
Then leave me, 'ere it comes, to enjoy whatever I get."
In a similar strain say- Ka'b Bin Zuhair:*

فان تهلك حوى فكل نفس سيجالبها لذلك جالبوها

"But if, O Juwaiy, thou perishest,
So will all beings have their spoilers;"

and 'al-'Utbî:†

وقاعمنى دهرى ننى مشائرا فلما تعصى شطره عاد فى شطرى

"My fate divided with me my sons, on shares,
And, after its portion was used up, assailed mine."

So Waddâk Bin Thumail 'al-Mâzanî expresses a stoical submission to destiny thus:‡

تلاقوهم فتعرفو كيف صبرهم . على ما جنت فيهم بد الحدثان

"Meet them, and ye will know how patient
They are in bearing the injustice of fortune;"

and again 'Amrû Bin Ma'di Karb:§

كم من اخ لى صالح بواته بيدى لحدا
ما ان جرعت ولا هلعنت ولا يرد بكاي زندا

"How many a true brother to me
Have I buried with my own hands,
Nor sorrowed, nor bewailed,
Seeing my weeping would not profit!"

To these specimens belonging to the age before Muhammad may be added the following, from early post-islamic times, which breathe the same spirit.

Says 'al-Huraith Bin Zaid 'al-Khail, of the time of 'Umar:||

فلا تجزعى يا ام اوس فانه تصيب المنايا كل حاف وذى نعل

"But mourn not thou, O mother of Aus,
For fate seizes as well the sandalled as the barefoot;"

and Fâtimah Bint 'al-'Ajjam, said to have been a cousin of Muhammad:¶

كل ما حى وان امرو واردو الخوص الذى وردوا

"All the living, though they be princes,
Will come to the same cistern as these;"

* *Hamasa* Carmina, ed. Freytag, p. 441.

† *Hamas*, p. 57.

‡ *Hamas*, p. 389.

† *Hamas*, p. 478.

§ *Hamas*, p. 83.

¶ *Hamas*, p. 414.

and Duraid Bin 'aṣ-Ṣimmah, a contemporary of Muḥammad:*

قتال امرئ أسى أخاه بنفسه ويعلم أن المرء غير مجلد
"Fighting as a hero fights, aiding his brother with his life,
And who knows that man is not immortal;"

and the same again:†

أبى القتل إلا أأل صمة أنهم أبو غيره والفدر يجرى إلى الفدر
"Slaughter is bent upon the race of Ṣimmah,
Nor seek they aught else—fate meets fate;"

and again:‡

تقول ألا تبقى أخاك وقد أرى مكان البكا لا كن بنبت على الصبر
"Says she: Mourn'st thou not for thy brother? and I see cause
For mourning, yet stand fast in patience;"

and 'Iyās Bin 'al-'Aratt:§

هممت بأن لا أطلع الدعر بعدهم حياء فكان الصبر أبعى وأكرم
"I thought no more to relish life, deprived of them;
But patience holds out, and is to be preferred in honor."

But there are other passages to be met with, in this later poetry, which indicate that the publication of the *Kurān* gave a new turn to the flight of the Arab muse, by leading it to the recognition of a personal Deity.

For example, we find 'Abū-Khirāsh 'al-Ḥudhailî, contemporary with 'Umar, in an elegy on the death of a son slain in blood-revenge, expressing himself thus:||

حببت إلهي بعد عروة إذ نجا خراش وبعض الشر أهون من بعض
"Deprived of 'Urwah, I praise my God
That Khirāsh is spared—one calamity is lighter than another;"

and a sense of dependence on divine sovereignty is expressed by 'Abdah Bin 'at-Ṭabīb, in a lament on the death of Kaïs Bin 'Āsim, as follows:¶

عليك سلام الله فيس بن عاصم ورحمته ما شاء أن يترحمها
"The peace of God be to thee, O Kaïs Bin 'Āsim,
And his mercy so long as he pleases to be merciful;"

also by Kṭailah, thus:**

يا راكبا أن الاكمل مظنة من صبح خامسة وأنت موقف
"O horseman, 'al-Uthail is a place thou may'st think to reach
On the fifth day, at dawn, if thou art helped of God."

* Hamas, p. 379. † Hamas, p. 381. ‡ Hamas, p. 380. § Hamas, p. 461.
|| Hamas, p. 365. ¶ Hamas, p. 367. ** Hamas, p. 437.

2. Let us now inquire into the teachings of the *Kurân* on the subject of divine sovereignty: first determining the signification of the root *قَدَر*, as used in the *Kurân*, from which comes *الْقَدَر*, the Muslim term for predestination; and afterwards citing other texts which relate to the sovereignty of God in general, or declare his sovereignty with reference, particularly, to human actions. I will begin by bringing forward the few passages in which derivatives from *قَدَر* are employed in other senses than as predicating any thing of the Deity, as follows: * ii [xc]. 237, "the rich man is obligated for what he can command (*قَدَرُ*), and the poor man for what is at his command (*فَدَرُ*);" ii [xc]. 266, "they have no sovereign control over (*لا يفقدون على*) that which they acquire;" v [cxiv]. 38, "before ye get the control over them (*تعدروا عليهم*);" x [lxxxiv]. 25, "and the people of the earth imagine that they have command of it (*فادرون عليها*);" xiii [xc]. 18, "he sends down water from heaven, so that water-courses flow to their utmost capacity (*بقدرها*);" xvi [lxxiii]. 77, "a servant under a master, who has no disposing power over (*لا يفدّر على*) any thing;" xxxiv [lxxxv]. 10, "saying: Make thou coats of mail, and use judgment (*ومدّر*) in the interchaining;" xxxiv [lxxxv]. 12, "and stationary basins (*مدور*, lit. measures);" xlviii [cviii]. 21, "and other things which ye have not at command (*لم تعدروا عليها*), which God holds in his own hand;" lvii [xcix]. 29, "because they who are taught by written revelation [Jews and Christians] know not that it is not theirs to command any thing of the favor of God (*الآ يفدرون على شيء من فضل الله*);" lxviii [xvii]. 25, "and in the morning they went out with a determined purpose (*وغدوا على حرد فادرين*);" lxx [xlvi]. 4, "on a day the measure of which (*مقدار*) will be fifty thousand years;" lxxiv [ii]. 18-20, "he considers and determines (*مدّر*)—so let him be slain! how does he determine (id.)?—and again, let him be slain! how does he determine (id.)?" lxxvi [lii]. 16, "wine-jars of silver, of which they shall have absolute command (*قدروها*) (*تقدروا*)."

* All our citations being from the Arabic text, the received order of the *Sûrahs* will be followed; but the number of each as chronologically determined by Rodwell (*The Koran: Transl.* . . London, 1861), chiefly after Weil, Muir, and Noldeke, will be inserted in brackets, that the reader may know, as to all cases in which doctrinal views are expressed, whether they were earlier or later views of the Prophet.

From these examples it would seem that the generic idea of *قدر* is to have disposing power. We will next pass in review all those passages of the Kurân in which any form derived from this root is used to express relations of the Deity to the world: ii [xci]. 19, "and if God had pleased, he would have taken away their hearing and their eyes—verily, God is a supreme sovereign

(على كل شيء قدير) ii [xci]. 100, "whatever verse we abolish or cause to be forgotten—we bring a better than that, or its like: knowest thou not that God has all things at his

command (على كل شيء قدير) ii [xci]. 103, "but pardon and forgive, until God shall come with his mandate—verily, God is

sovereign over all (على كل شيء قدير) ii [xci]. 143, "wherever ye may be, God will bring you together—verily, God controls all things (id.);" ii [xci]. 261, "and so, after all has been made plain to him, he says: Verily, God has all things under his control (id.);" ii [xci]. 284, "to God belongs whatsoever is in the heavens and whatsoever is on the earth; and whether ye disclose that which is within you, or conceal it, God will reckon with you for it; and he pardons whom he will, and punishes whom he will—inasmuch as God is a supreme sovereign (id.);" iii [xcvii]. 25, "say thou: O God, sovereign disposer of dominion, thou givest rule to whom thou wilt, and takest away power from whom thou wilt; thou exaltest whom thou wilt, and humblest whom thou wilt: all good is at thy disposal—verily, thou art a supreme sovereign (id.);" in [xcvii]. 27, "and God knows whatsoever is in the heavens and whatsoever is on the earth, and God governs all things (id.);" in [xcvii]. 159, "and do ye, after a disaster has befallen you, the like of which ye have twice already met with, say: Whence is this? Say thou: It is of yourselves—verily, God orders all things (id.);" iii [xcvii]. 186, "and to God belongs the dominion of the heavens and the earth—God is sovereign over all things (id.);" iv [c]. 132, "if he pleases, he will put you away, O men, and bring in others—God has sovereign power so to do (كان على ذلك قدير) iv [c]. 148, "whether ye perform a virtuous deed openly or secretly, or whether or not ye find excuses for a vicious act, verily God

is a sovereign pardoner (بارء عفو قدير) v [cxiv]. 20, "to God belongs the dominion of the heavens and the earth, and the intervening space, inasmuch as he creates what he will—and God

is sovereign over all things (على كل شيء قدير) v [cxiv]. 22, "O people taught by revelation, our Messenger came to you with convincing proofs, when prophecy was intermitted . . .—God has all things at his disposal (id.);" v [cxiv]. 44, "know-

est thou not that the dominion of the heavens and the earth belongs to God, who punishes whom he will and pardons whom he will; and that God is a supreme sovereign (id.)?" v [cxiv]. 120, "to God belongs the dominion of the heavens and the earth, and whatsoever they contain is his, and he is sovereign over all things (id.);" vi [lxxxix]. 17, "and if God touches thee with evil, there is no one but himself to remove it; and if he touches thee with good, he is a supreme sovereign (id.);" vi [lxxxix]. 37, "and they say: If there has been no sign sent down to him from his Lord [we will not believe]; say thou: God has sovereign power to send down a sign (ان الله قادر على ان

ينزل آية);" vi [lxxxix]. 65, "say thou: He has sovereign power (القادر على) to bring upon you a punishment, either from above or from beneath your feet;" vi [lxxxix]. 91, "nor do they esti-

mate God agreeably to what is due to his sovereignty (قدرة), when they say that God makes no revelation to a mortal"—comp. xxii [cvii]. 73, and xxxix [lxxx]. 67; vi [lxxxix]. 95, 96, "verily, God is . . . the divider of the dawn, and he hath made the night for repose, and the sun and moon for reckoning—those things are the ordinance (تقدير) of the Almighty, the All-wise;" viii [xcv]. 42, "and know ye that a fifth part of whatsoever ye take as spoil belongs to God and to the Messenger . . . and that God is

sovereign disposer of all things (على كل شيء فدير);" ix [cxiii]. 39, "if ye go not out, God will punish you with a sore punishment, and will substitute some people in your stead: ye will not harm him, inasmuch as God has all things at his command (id.);" x [lxxxiv]. 5, "it is he who set the sun for a shining

light, and the moon to give radiance, and ordained for it (قدرة) stations, that ye might know the number of the years"—comp. xxxvi [lx]. 39; xi [lxxv]. 4, "to God ye will give account, and

he is a supreme arbiter (على كل شيء قدير);" xiii [xc]. 9, "God knows what each female bears in her womb, nor doth the womb either shorten or prolong its time—it is his to ordain all things

(وكل شيء عنده بمقدار);" xiii [xc]. 26, "God enlarges bounty to whom he will, using sovereign discretion (ويقدر)"—comp. xvii [lxvii]. 32, xxviii [lxxxix]. 82, xxix [lxxxix]. 62, xxx [lxxxiv]. 36, xxxiv [lxxxv]. 35-8, xxxix [lxxx]. 53, and xlii [lxxxiii]. 10; xv [lvii]. 21, "nor is there any thing not provided beforehand by us, or which we send down otherwise than according to a fore-

known decree (وان من شيء الا عندنا خزائنه وما ننزله الا بقدر معلوم);"

xv [lvii]. 59-60, "excepting the family of Lot, all of whom we spare; save his wife, whom we have ordained to be a loiterer (قَدَرْنَا أَتَهَا مِنْ الْغَايِبِينَ)"—comp. xxvii [lxviii]. 58; xvi [lxxiii]. 72, "God has created you, and he will hereafter call you to himself; and some of you will be reduced to the most abject senility, so as, after having had knowledge of things, to be cognizant of nothing—God is all-wise, a supreme sovereign (قَدِيرٌ);" xvi [lxxiii]. 79, "the secrets of the heavens and the earth are God's; nor is the matter of the resurrection-hour aught but as a wink of the eye, or rather it is more within his power than that—God has all things at command (عَلَى كُلِّ شَيْءٍ قَدِيرٌ);" xvii [lxvii]. 101, "and do they not see that God who created the heavens and the earth has sovereign power (فَادِرٌ) to create such beings as they are?"—comp. xxxvi [lx]. 81; xviii [lxix]. 43, "and propound to them a similitude of this present life, which is like water sent down by us from heaven, so that the plants of the earth are fattened by it, and on the morrow become stubble scattered by the winds—God disposes of all things (عَلَى كُلِّ شَيْءٍ مُقْتَدِرًا);" xx [lv]. 42-3, "so thou didst tarry for years among the people of Madyan; and afterwards thou wast confronted by a divine decree (جِيئَتْ عَلَى قَدَرٍ), O Moses, inasmuch as I had chosen thee for myself;" xxi [lxv]. 87, "for he imagined that we should not have the disposal of him (لَنْ نَفْعُرَ عَلَيْهِ);" xxii [cvii]. 6, "those things evidence that Allah is the True God, and that he vivifies that which is dead, and that he has supreme power (عَلَى كُلِّ شَيْءٍ قَدِيرٌ);" xxii [cvii]. 40, "they are authorized who fight because of injuries received, and it pertains to God's sovereignty to defend them (وَأَنَّ اللَّهَ عَلَى نَصْرِهِمْ لَعَدِيدٌ);" xxiii [lxiv]. 18, "and we send down water from the heavens, according to a divine decree (بِقَدَرٍ); and we cause it to remain upon the earth, inasmuch as it is at our sovereign discretion to take it away (وَأَنَّا عَلَى ذَهَابٍ بِهِ لِعَادِرُونَ)"—comp. xliii [lxi]. 10; xxiii [lxiv]. 97, "and indeed we have sovereign power (لِعَادِرُونَ) to show thee that which we threaten them with;" xxiv [cv]. 44, "God creates what he will—verily, God is a supreme sovereign (عَلَى كُلِّ شَيْءٍ قَدِيرٌ);" xxv [lxvi]. 2, "and who created all things, and determined respecting the same with absolute determination (وَفَعْدُهُ تَعْدِيرًا);" xxv [lxvi]. 56, "and

thy Lord is a supreme sovereign (قَدِيرٌ); xxix [lxxxix]. 19, "say thou: Go ye to and fro on the earth, and behold how he made the world from the beginning—hereafter will God bring forth another creation—verily, God has all things at his command

(على كل شيء قَدِيرٌ);" xxx [lxxxiv]. 49, "behold thou the imprints of the mercy of God: how he vivifies the earth, after it has died—in very deed, a restorer of life to the dead is there, and all things

are at his bidding (وهو على كل شيء قَدِيرٌ)—comp. xli [lxxi]. 39, and xlii [lxxxiii]. 7; xxx [lxxxiv]. 53, "he creates what he will, seeing that he is the All-wise, the Supreme Sovereign (القَدِيمُ);" xxxiii [ciii]. 27, "and hath caused you to inherit their land, and their dwellings, and their wealth, even a land which ye had

not trodden—God is a supreme sovereign (على كل شيء قَدِيرٌ);" xxxiii [ciii]. 38, "no blame rests upon the Prophet in respect to that which God ordains for him as the divine rule of conduct, nor were previous prophets to blame for what was permitted to them—and God's ordering is in accordance with a determined

decree (وكان أمر الله قَدَرٌ مقدورا);" xxxiv [lxxxv]. 17, "and we or-

dained (وجئنا) journeying amidst them;" xxxv [lxxxvi]. 43, "and have they not journeyed to and fro in the earth, and so beheld what hath been the punishment of those who were before them, and were mightier than they? nor is any thing in heaven or earth too much for him to do, seeing that he is all-wise, a supreme sovereign (قَدِيرٌ);" xxxvi [x]. 38, "and the sun proceeding to its place of rest—that is an ordinance (تَقْدِيرٌ) of the Almighty, the All-wise;" xli [lxxi]. 9, "and set thereupon

mountains, rising above it, and blessed it, and apportioned (قَدَر) thereupon its aliments, in four days, equably, for those who should seek after them;" xli [lxxi]. 11, "and we have adorned the physical heavens with lights, with watchful care—that is an ordinance (تَقْدِيرٌ) of the Almighty, the All-wise;" xlii [lxxxiii]. 26, "and if God had bestowed largely of bounty upon his servants, they would have become transgressors in the earth: but he sends down whatsoever he will, according to a divine decree

(بِقَدَر);" xlii [lxxxiii]. 28, "and among his signs is the creation of the heavens and the earth, and of the animals which he hath distributed therein, which he has sovereign power to gather when he will (وهو على جميعهم إذا يشاء قَدِيرٌ);" xlii [lxxxiii]. 49, "or he gives both together, males and females, and makes whom he will to be childless—he is indeed all-wise, a supreme sove-

reign (قديم);" xliii[lxi]. 41, "or we shall show thee that with which we threaten them, and so indeed have the sovereign disposal of them (فأنا عليهم مقتدرون);" xlvi[lxxxviii]. 32, "and do they not see that God who created the heavens and the earth, and faltered not in creating these, has power to vivify the dead (فقدِير)؟—nay, he has sovereign control (فديم) over all things;" xlviii[cviii]. 21, "and other things which are not at your command (لم تقدرُوا عليها), but which are truly within his grasp, inasmuch as God is sovereign disposer of all things (على كل شيء قديرًا);" liv[xlix]. 12, "and we have made the earth to burst forth with fountains, so that water comes, in obedience to a fore-ordained mandate (فالتقى الماء على أمر قد قدر);" liv[xlix]. 42, "they discredited all our signs, and so we took them in hand as a sovereign (معتدِر) mighty one;" liv[xlix]. 49, "verily we have created all things according to a fixed decree (بِقَدَر);" liv[xlix]. 54-5, "the pious will be in gardens watered by a river, in an abode of righteousness, in the company of a sovereign king;" lvi[xlv]. 60, "we have decreed (قدَرْنَا) for you your several deaths, and nothing prevents us;" lvii[xcix]. 2, "to him pertains the dominion of the heavens and the earth; he makes alive, and causes to die; and he has the sovereign disposal of all things (على كل شيء قدير);" lix[cii]. 6, "but God gives power over whom he will to his Messengers; and God has the sovereign disposal of all things (id.);" lx[ex]. 7, "it may be that God will put love between you and those with whom ye are at enmity—inasmuch as God is a sovereign (فديم);" lxiv[xciii]. 1, "he is exalted—whatsoever is in the heavens, and whatsoever is on the earth, is God's; to him belongs the dominion and the praise; and he has the sovereign disposal of all things (على كل شيء قدير);" lxv[ci]. 3, "verily, God accomplishes what he ordains—he hath established for every thing a fixed decree (قدَرَا);" lxv[ci]. 7, "and let him to whom is measured out his bounty (ومن قدر عليه رزقه) disperse abroad of that which God has given him—God requireth not of any person except what he hath given to him;" lxvi[cix]. 8, "and do thou pardon us!—verily, thou art a supreme sovereign (على كل شيء قدير);" lxvii[lxiii]. 1, "blessed be he who holds the dominion, and who has the sovereign disposal of all things (id.);" lxx[xlvii]. 40-1, "verily, it is at our sovereign discretion (نقادرُون)

انا) to substitute a better people in their place, and nothing prevents us;" lxxiii [iii]. 20, "but God has the measuring out (يَقْدِرُ) of the night and the day;" lxxv [xl]. 3-4, "do men suppose that we shall not bring together their bones?—nay, we have sovereign power (قَادِرِينَ) to finish out even the extremities of their fingers;" lxxv [xl]. 40, "has not such a one sovereign power (اليس ذلك بقادر) to vivify the dead?" lxxvii [xxxvi]. 21-3, "which we put in a safe place, for a foreknown destiny (الْحَيَاةَ) (فَقَدَرْنَا), for it belongs to us to apportion destiny (فَقَدَرْنَا)—hail then to the fore-ordainers (فَنَعْمَ الْعَادِرُونَ) lxxx [xxiv]. 19, "he created him, and allotted to him his destiny (فَقَدَرَهُ);" lxxxvi [xxii]. 8, "verily he has sovereign power (لِقَادِرٍ) to bring him to account, on the day when secrets shall be made manifest;" lxxxvii [xxv]. 1-3, "extol the name of thy Lord, the Most High, who made the world, and fashioned it to completeness, who fore-ordained (فَقَدَرُ) and guides accordingly;" lxxxix [xxxix]. 16, "or when he tries him by measuring out to him his bounty (فَقَدَرُ عَلَيْهِ رِزْقَهُ);" xc [xviii]. 4-5, "most surely have we created man in a state of trouble—does he suppose that no one has the sovereign disposal of him (يَقْدِرُ عَلَيْهِ)?" xcvi [xxi]. 1-4, "we revealed it on the night of destiny (الْقَدَرُ): and how shall one make thee to know what is the night of destiny? the night of destiny is better than a thousand months; thereon the angels and the spirit descend, by the permission of their Lord, to execute all his mandates."

All these passages represent the Deity either as (1) having absolute disposing power, or (2) using sovereign discretion, or (3) fore-ordaining; and we here find not only the phenomena of the physical world, but also the destinies of men, and even human action and feeling (see xv [lvii]. 60, and lx [cx]. 7), subordinated to the divine control. We also see that الْقَدَرُ had already acquired the special sense of 'destiny predetermined by God' (see lxxvii [xxxvi]. 22).

To complete this part of our investigation, it remains to take the testimony of those texts of the *Kurân* which declare divine sovereignty in other terms. I shall not attempt to exhaust this class of texts, but shall only bring forward some fair specimens of it, and especially those which speak of the sovereignty of God as involved in human action: ii [xci]. 99, "they who are infidels among the people favored with written revelations, and among the idolaters, like not that any favor should be bestowed by

your Lord on you, whereas God distinguishes with his mercy whomsoever: he will (يختص برحمته من يشاء); iii [xcvii]. 77, "will they then lust after another religion than that of God? while to him are subject all beings in the heavens and on the earth, whether they will or no (وله اسلم من فى السموات) (والارض طوعا وكرها), and will be made to give account;" iii [xcvii]. 92, "and whoever may disbelieve, yet, verily, is God independent of all creatures (غنى عن العالمين); iii [xcvii]. 139, "nor does it happen to any person to die except by the permission of God, according to a determined decree (بإذن الله كتابا موجلا);" iv [c]. 80, "and if any good happens to them, they say: 'This is from God; and if evil befalls them, they say: 'This comes of thee: say thou, that every thing is from God (كل من عند الله);" v [cxiv]. 1, "verily, God appoints as he pleases (بحكم ما يريد);" vi [lxxxix]. 59, "and with him are the keys of mystery, which no one knows but himself; and he knows whatsoever is on the dry land and in the sea; and not a single leaf falls without his knowledge; nor is there one seed-grain in the darkness of the earth, nor green thing, nor dry, which is not entered in a plain book (الا فى كتاب مبين)"—comp. x [lxxxiv]. 62; ix [cxiii]. 51, "say thou: There shall no evil befall us, but what God fore-ordained for us (ما كتب الله لنا);" xi [lxxv]. 1, "a book of which the verses were predetermined (احكمت), and afterwards set forth, from the presence of a discerning ordainer;" xi [lxxv]. 8, "every thing is entered in a plain book (كل فى كتاب مبين);" xi [lxxv]. 108-9, "as for the miserable, they will be in Hell, where they will sigh and howl, abiding there so long as the heavens and the earth endure, save the will of thy Lord—verily, thy Lord does that which he pleases (الا ما شاء ربك ان ربك تعال لما يريد);" xiii [xc]. 2, "it is God who reared the heavens without supports—ye behold them—and, more than that, possesses the throne of dominion, and constrains sun and moon to do his bidding: every thing runs its course to a predetermined end (كل جارى لاجل مسمى)."

The passages relating to divine sovereignty as respects human action arrange themselves under three heads: 1. those which affirm a divine agency as involved in human action; 2. those which declare human responsibility; 3. those in which God's agency is represented as conditioned by that of man.

1. Passages affirming a divine agency in human action: ii [xci.] 5-6, "as for the unbelievers, it matters nothing to them, whether thou warnest them, or dost not warn them: they will

not believe; God hath sealed up their hearts and their ears (ختم الله على قلوبهم وعلى سمعهم), and the darkness of night is over their eyes;" i[xci]. 28, "and when thy Lord said to the angels: I am about to place on the earth a vicegerent [i. e. man], they said: Wilt thou place thereon one who will work corruption there, and shed blood, while we magnify thee with praise, and say: Hallowed be Thy name? to which he replied:

I know what ye know not (أتى أعلم ما لا تعلمون);" ii[xci]. 209, "and God guides into the right path whomsoever he will (والله يهدي من يشاء إلى صراط مستقيم);" ii[xci]. 254, "and if God had so willed, they would not have contended with one another: but God does what he pleases (ولو شاء الله ما افتتلوا ولكن الله يفعل ما يريد);" iii[xcvii]. 172, "and let not the unbelievers imagine that our long suffering towards them is a favor to them—we bear long with them only in order that they may add to their iniquity

(أتما نملى لهم ليزدادوا أثما وخلق) iv[c]. 32, "God is pleased to make your burthens light, inasmuch as man is by nature infirm (والانسان ضعيفا);" v[cxiv]. 45, "and as for those whom God chooses to entangle (ومن برد الله فنته), thou wilt not obtain from him any thing for them—these are they whose hearts God

chooses not to purify (لم يرد الله أن يظهر قلوبهم);" vi[lxxxix]. 25, "and among them are some who listen to thee whose hearts we have veiled, lest they should discern the revelation, and into whose ears we have put deafness (وجعلنا على قلوبهم أكنة أن يفقهوه)

(وفى آذانهم ورا), and who, if they should witness all possible miracles, would not believe in them;" vi[lxxxix]. 107, "and if God had so willed, they would not have been idolaters (ولو شاء) —comp. vi[lxxxix]. 149, "the idolaters will say: If God had so willed, we should not have been idolaters, nor our fathers, nor should we have done any thing unlawful: thus did they who were before them falsify, until they tasted our punishment: say thou: Is there knowledge with you?—then produce it for us; ye do but follow after conjecture, ye do but advance opinion: say thou: It belongs to God to certify decisively—if, then, he had so willed, he would have directed all of you (فلو شاء لهداكم اجمعين);" vi[lxxxix]. 111, "and if we had caused the angels to come in to them as guests, and the dead had spoken to them, and we had called up every thing before them, they would not have believed unless God had so willed (ما كانوا) vi[lxxxix]. 123, "in like manner have we put in every city certain great men, to be its sinners, in order

that they might practice their deceptions therein (جعلنا في كل قرية) vi [lxxxix]. 138, "and so have the accomplices of many of the idolaters allured them to kill their children, that they might destroy them, blinding them to their duty: and if God had so willed, they would not have done this (ولو شاء الله ما فعلوه)—therefore let them alone, and their deceptions;" vii [lxxxvii]. 41, "and if God had not guided us, we

should not have been directed (وما كنا لنهتدى لولا ان هدانا) vii [lxxxvii]. 154, "and Moses chose seventy men against our appointed time; and, when the earthquake came upon them, he said: O Lord, if thou hadst so willed, thou wouldst have destroyed them before, and me also: wilt thou destroy us on account of what fools among us have done?—it [the earthquake] is but a trial on thy part, wherewith thou dost lead astray whom thou wilt, and dost direct whom thou wilt (ان هي)

(الا فتنتك تضل بها من تشاء ونهدي من تشاء) vii [lxxxvii]. 178, "and in very deed have we created for Hell many genii and

men (ولقد ذرأنا لجهنم كثيرا من الجن والانس)—who have hearts with which they discern not, and eyes with which they see not, and ears with which they hear not;" viii [xcv]. 24, "and know ye that God interposes between a man and his heart (بحول بين المرء وقلبه) viii [xcv]. 64, "hadst thou expended all the riches of the earth, thou wouldst not have joined their hearts in friend-

ship; but God hath united them (ما الله بمتحد بينهم ولكن الله اتف) ix [cxiii]. 86, "and let not their wealth and their children excite thine admiration—God purposes only to punish them therewith in this life, and that their souls should expire in

unbelief (انما يريد الله . . . وتزهق انفسهم وهم كافرون) ix [cxiii]. 88, "they were content to keep company with opposers, and their hearts were sealed so that they should not perceive (ولبع) xi [lxxv]. 36, "and my warning, though I should desire to warn you, would not profit you, if God should be pleased to lead you into error (ان كان الله يريد ان يغويكم) xi [lxxv]. 120, "and if thy Lord had so willed, he would have made men one people; and only they on whom thy Lord has mercy cease to be at variance with one another; and for that did he create them (ولذلك خلقهم) xii [lxxvii]. 53, "the soul prompts to evil, save that my Lord is merciful (ان

(النفس لامارة بالسوء الا ما رحم ربي) xxxix [lxxx]. 58, "or lest it [the lost soul] say: If God had guided me, I should certainly

have been one of those who fear him (لو ان الله هداني لكنت من);

xcix[xxiii]. 7-8, "and by a soul, with God's fashioning it to completeness, and inspiring it with its wickedness and its piety (ونفس وما سواها فالههها فاجورها وتقواها);"

2. Passages which declare human responsibility: iv[c]. 111, "and whosoever gets to himself a sin, gets it solely on his own

responsibility (ومن يكسب اثما فاتما يكسبه على نفسه); v[cxiv]. 100, "say thou: Wickedness and goodness are not indifferent

[to God] (لا يستوى الخبيث والطيب); vi[lxxxix]. 69, "and let alone those who make a sport and a mockery of their religion, and whom this present world has deluded; and thereby bring to remembrance that any soul perishes for what it has got to itself (ان تبسل نفس بما كسبت); vii[lxxxvii]. 27, "and when they commit a deed of shame, they say: We have found that our fathers did so, and God obliges us to do it: say thou: Surely,

God requireth not shameful doing (ان الله لا يأمر بالفحشاء); ix[cxiii]. 35, "on the day when their spoils shall be heated in the fire of Hell, and their foreheads, and their sides, and their backs, shall be cauterized therewith—this is what ye treasure up for yourselves: may ye taste, then, that which ye lay in store (هذا ما كنتم لانفسكم فذوقوا ما كنتم تكنزون); ix[cxiii]. 71, "have they not heard the story of those who were before them—the people of Noah, of 'Âd, and of 'Thamûd, and the people of Abraham, and the Midianites, and the inhabitants of the cities which were overthrown, to whom their Messengers came with convincing proofs? for God is not such that he would do them injustice, but they did injustice to themselves (ولكن كانوا انفسهم); ix[cxiii]. 112, "verily, God hath purchased of believers themselves and their possessions, at the price of their hav-

ing Paradise (ان الله اشترى من المؤمنين انفسهم واموالهم بان لهم الجنة)—they contend in the way of God, and kill and are killed, upon a solemn engagement on his part, certified in the Law and the Gospel, as well as in the Kurân: and who is more faithful to his promise than God?—be ye glad, then, of your bargain which ye have made (فاستبشروا ببيعكم الذي باعتم به); x[lxxxiv]. 31, "yonder will every soul experience that which it hath bargained

for (هنالك تبلوا كل نفس ما اسلفت); x[lxxxiv]. 108, "so then, whosoever is directed, it is solely a matter pertaining to himself; and whosoever goes astray, he himself bears the whole respon-

sibility of his wandering فمن اهتدى فانما يهتدى لنفسه ومن ضلّ) فانما يضلّ عليها."

3. Passages which represent God's agency as conditioned by that of man: ii[xci]. 9, "in their hearts is a disease, and so God increases their disease (ففى قلوبهم مرض فزادهم الله مرضا) ii[xci]. 24, "and as for the unbelievers, they say: What is it which God intends by this, as a parable? [Thus] he leadeth astray, as well as guideth, many thereby; but he doth not lead astray

thereby any except wicked doers (وما يضلّ به الا الفاسقين) ii[xci]. 82, "and they say: Our hearts are uncircumcised; nay, but God has cursed them for their unbelief (بل لعنهم الله بكفرهم), and so they believe little"—comp. iv[c]. 49; ii[xci]. 266, "and God doth not direct disbelieving people (والله لا يهدى القوم الكافرين)"; iii[xcvii]. 80, "seeing that God doth not direct wicked people (والله لا يهدى القوم الظالمين)"; iii[xcvii]. 96, "and how can ye disbelieve, when the verses from God are read to you, and his Messenger is in your midst? whosoever takes hold on God is guided aright (ومن يعتصم بالله فقد هدى الى صراط مستقيم) iv[c]. 154, "so then, because of their breaking their engagement, and disbelieving the divine miracles, and killing the prophets, iniquitously, and their saying: Our hearts are uncircumcised—nay, but God has sealed their hearts with their own unbelief (بل ضلّ الله عليها بكفرهم), so that their faith is but small;" v[cxix]. 16, "but, on account of their breaking their covenant, we have

cursed them, and made their hearts hard (فما نقصهم ميتاتهم لعناهم) (وجعلنا قلوبهم فاسية) so that they pervert the word of God, and forget a part of that which they were reminded of;" v[cxix]. 18, "there has indeed come to you from God a light, and a plain book of revelation, wherewith God guides in paths of peace those who follow his pleasure, and permissively leads them out from

darkness into light (يهدى به الله من اتبع رضوانه سبيل السلام ويخرجهم) (من الظلمات الى النور) vi[lxxxix]. 108, "and revile ye not those beings to whom they pray beside God, so that they vilify God in enmity, through ignorance—in the same way [in which they are deluded] do we make fair to every people its

own doings (كذلك زينا لكل امّة عملهم) vi[lxxxix]. 109–10, "say thou: Miracles are a prerogative of God alone; and how hard is it to persuade you that, if they were wrought, these would not believe, and that we turn away their hearts and their eyes, forasmuch as they did not believe in the revelation at once (ونقلب

(أَفَيَدَّبْتَهُمْ وَأَبْصَارَهُمْ كَمَا لَمْ يُؤْمِنُوا بِهِ أَوَّلَ مَرَّةٍ in their iniquity;” vii[xxxvii]. 26, “we have made the devils to be the familiar associates of those who are unbelievers (أَنَا جَعَلْنَا

الَّذِينَ يَاطِلِينَ أَوْلِيَاءَ لِلَّذِينَ لَا يُؤْمِنُونَ” vii[xxxvii]. 99, “but they could not believe in that which they had declared before to be false—thus it is that God seals up the hearts of unbelievers (كَذَلِكَ يَطْبَعُ اللَّهُ عَلَى قُلُوبِ الْكَافِرِينَ)—comp. x[xxxiv]. 75; vii [xxxvii]. 143, “I will turn aside from my miracles those who

magnify themselves in the earth (سَاصْرِفْ عَنْ آيَاتِي الَّذِينَ تَتَكَبَّرُونَ) unrighteously; and, though they should behold all possible miracles, they will not believe in them; and, though they should perceive the path of rectitude, they will not take it; and, though they see which is the way of error, they will take that for their path;” viii[xcv]. 55, “that shall be, because God changes not as to any favor which he bestows upon a people, until they change as to what depends upon themselves (ذَلِكَ بِأَنَّهُ

لَمْ يَكُ مَغْبِرًا نِعْمَةً أَنْعَمَ بِهَا عَلَى قَوْمٍ حَتَّى يَغْيُرُوا مَا بَانَفْسِهِمْ ix[cxiii]. 128, “God turns aside their hearts, because they are a people

without understanding (صَرَفَ اللَّهُ قُلُوبَهُمْ بِأَنَّهُمْ قَوْمٌ لَا يَفْقَهُونَ) x [xxxiv]. 9, “as for those who believe, and perform the acts of goodness, God will direct them in recompense of their faith

(يَهْدِيهِمْ رَبُّهُمْ بِإِذْنِهِمْ) x[xxxiv]. 99–100, “and if thy Lord had so willed, all who are on the earth would have believed together—wilt thou, then, urge men to become believers, seeing that it belongs not to any soul to believe without the permission of God, and he lays the penalty [of unbelief] upon those who are void of discernment (وَيَجْعَلُ الرَّجْسَ عَلَى الَّذِينَ لَا يَعْقِلُونَ) xiii [xc]. 12, “God changes not as to what concerns any people, until they change in respect to what depends upon themselves

(أَنَّ اللَّهَ لَا يَغْيِرُ مَا يُعْمَلُ بِعَمَلٍ حَتَّى يَغْيُرُوا مَا بَانَفْسِهِمْ) xiii[xc]. 27, “say thou: Verily, God leads astray whomsoever he will, and directs to himself those who are penitent (أَنَّ اللَّهَ بِصَلِّ مِنْ شَاءَ وَيَهْدِي) (أَلَيْهِمْ مِنْ آثَابٍ).”

Such was Muhammad's doctrine of divine sovereignty, as developed in the *Kurân*. It seems, then, that he no more denied human freedom than he predicated of God a sovereignty embracing even the actions of men: while, as for the reconciliation of these seemingly opposite positions, whether designed or not, the language of the *Kurân* appears to imply a contingency of

the determinations of the Deity, in respect to human action, upon the foreseen issues of man's exercise of his moral liberty; and that man might cease to be free, by way of divine penalty for the misuse of freedom.

But there are traditions which claim to give us Muhammad's teachings on this subject. All these, also, deserve to be considered: for, if not found positively inconsistent with the *Kurân*, their universal acceptance by Muslims, as authentic, must carry our acknowledgment of them along with it; besides that, even if their authenticity be doubted, they still constitute a highly important chapter, and one hitherto unpublished out of the pale of Islâm, of early Muslim speculation on this most interesting subject. I shall, therefore, cite these traditions here, in full, in the order and form in which they are embodied in the collections of Bukhârî and Muslim, omitting, however, the repetitions, by different lines of descent, in the same collection, as well as other traditions which vary from those cited only in trivial points, and bringing together the parallel traditions of the two authorities.* We will first introduce Bukhârî's Chapter of Predestination (باب في القدر), beginning as follows:

"We are told as a tradition by 'Abu-l-Walîd Hishâm Bin 'Abd-al-Mâlik, that Shu'bah tells us, saying: Sulaimân 'al-'A'mash related to me the following: I heard Zaid Bin Wahb, on the authority of 'Abd-allâh—to whom may God be gracious! say: The Messenger of God . . . , who is the True, the Trusted, gave the following to be handed down as a tradition, saying: 'Any one of you is made up in his mother's womb in the course of forty days, after which, for the same length of time, he is blood coagulated, and then, for the same time, a mass of flesh; afterwards, God sends an angel who is charged with four decrees, signifying his allotment of good, his moral conduct, his term of life, and whether he is to be one of the miserable or one of the blessed. Therefore, by God, any one of you (or, a man) may conduct himself as do those destined for Hell, until the distance between him and it is not two spans (or, an ell), and yet the registered decree shall prevent him, so that he shall conduct himself as do those destined for Paradise, and accordingly enter therein: and a man may even conduct himself as do those destined for Paradise, until the distance between him and it is not an ell (or, two ells), and yet the registered decree shall prevent him, so that he shall conduct himself as do those destined for Hell, and accordingly enter therein.' Adam's reading is 'only an ell (or, two spans)'—

قال ان احداكم يجمع في بطن أمه أربعين يوما ثم علفه مثل ذلك ثم يكون مضغته مثل ذلك ثم يبعث الله ملكا فيؤمر بأربع برزقه [وعمله]

* We use the MS. copy of Bukhârî's *Sahih*, and the edition of Muslim's *Musnad 'as-Sahih*, specified in vol. vii, p. 61, of this Journal. The passages quoted from the former may be found on foll. 294-5, recto; those from the latter on pp. 568-79 of Part ii.

واجله وشقى او سعيد فوالله ان احدكم او الرجل يعمل بعمل اهل النار حتى ما يكون بينه وبينها غير باع او ذراع فيسبق عليه الكتاب فيعمل بعمل اهل الجنة فيدخلها وان الرجل ليعمل بعمل اهل الجنة حتى ما يكون بينه وبينها غير ذراع او ذراعين فيسبق عليه الكتاب فيعمل بعمل اهل النار فيدخلها قال ادم الا ذراع او باع —

The same tradition is given in Muslim's Book of Predestination (كتاب القدر), thus:

"We are told as a tradition by 'Abû Bakr Bin 'Abî Shaibah, that 'Abû Mu'âwiyah and Waki' inform us as follows; and we are told by Muhammad Bin 'Abdallâh Bin Numair 'al-Hamadânî, to use the words of the latter (واللفظ له): We are informed by my father, by 'Abû Mu'âwiyah, and by Waki', saying: We are informed by 'al-'A'mash, on the authority of Zaid Bin Wahb, on the authority of 'Abdallâh—to whom may God be gracious! saying: The Messenger of God . . . , who is the True, the Trusted, gave the following to be handed down as a tradition: 'As for any one of you, his generation in the womb of his mother is effected in the course of forty days, after which, for the same length of time, he exists there in the form of coagulated blood, and then, for the same time, as a mass of flesh; afterwards, the Angel is commissioned to breathe the living spirit into him, and is charged, in four words, to write down his allotment of good, his moral conduct, his term of life, and whether he is to be one of the miserable or one of the blessed. Therefore, by him beside whom there is no God, any one of you may even conduct himself as do those destined for Paradise, until there is only an ell between him and it; and yet the registered decree shall prevent him, so that he shall conduct himself as do those destined for Hell, and accordingly enter therein: and any one of you may even conduct himself as do those destined for Hell, until the distance between him and it is only an ell; and yet the registered decree shall prevent him, so that he shall conduct himself as do those destined for Paradise, and accordingly enter therein'"—

ان احدكم يجمع خلفه فى بطن امه اربعين يوما ثم يكون فى ذلك علقه مثل ذلك ثم يكون فى ذلك مضغة مثل ذلك ثم يرسل الملك فينفخ فيه الروح ويؤمر بأربع كلمات يكتب رزقه وعمله واجله وشقى او سعيد فالذى لا انة غيره ان احدكم ليعمل بعمل اهل الجنة حتى ما يكون بينه وبينها الا ذراع فيسبق عليه الكتاب فيعمل بعمل اهل النار فيدخلها وان احدكم ليعمل بعمل اهل النار حتى ما يكون بينه وبينها الا ذراع فيسبق عليه الكتاب فيعمل بعمل اهل الجنة فيدخلها —

of the Companions of the Messenger of God ... whose name was Hudhaifah Bin 'Asid 'al-Ghifari, and told him as a tradition what 'Ibn Mas'ud had said: then said Hudhaifah: And how can a man be one of the miserable, without moral conduct (وَكَيْفَ يَشْعَى رَجُلٌ بِغَيْرِ عَمَلٍ)? to which the reporter replied: Dost thou wonder at that? and yet I heard the Messenger of God ... say: 'When the seed has lain for two and forty nights, God sends an angel to it, who gives it form, and creates its senses of hearing and sight, and its skin, flesh, and bones; after which he says: O my Lord, a male or a female? and thy Lord determines as he will, and the Angel writes it down; then he inquires: O my Lord, the being's term of life? and thy Lord says what he will, and the Angel writes it down; and again he inquires: O my Lord, the being's allotment of good? and thy Lord determines as he will, and the Angel writes it down. Then the Angel goes forth with the written leaf in his hand, neither adding to, nor taking aught from, a single mandate'—

يقول اذا مرّ بالنطفة اثنتان واربعون ليلة بعث الله ملكا فصورها وخلق سمعها وبصرها وجلدها ولحمها وعظامها ثم قال يا رب اذكر ام انثى فيقضى ربك ما شاء ويكتب الملك فيقول يا رب اجله فيقول ربك ما شاء ويكتب الملك ثم يقول يا رب رزقه فيقضى ربك ما شاء ويكتب الملك ثم يخرج الملك بالصحيفة في بده فلا يزيد على امر ولا ينقص —

"I am told as a tradition by Muhammad Bin 'Ahmad Bin 'Abi Khalaf, that Yahya Bin 'Abi Bukair informs us, that Zuhair 'Abu Khathmah informs us, saying: I am told as a tradition by 'Abdallah Bin 'Ata', that 'Ikrimah Bin Khalid told him as a tradition, that 'Abu-t-Tufail told him as a tradition, saying: I entered the abode of 'Abu Sariha, Hudhaifah Bin 'Asid 'al-Ghifari—to whom may God be gracious! whereupon he said: I heard, with these my own ears, the Messenger of God ... say: 'The seed lies in the womb for forty nights, after which the Angel gives it form' (says Zuhair: my belief is that he said '[the Angel] who creates it'), and inquires: O my Lord, a male or a female? whereupon God prescribes either a male or a female; afterwards he inquires: O my Lord, straight or crooked? whereupon God prescribes a being either straight or crooked; he also inquires: O my Lord, what is its allotment of good? what is its term of life? what is its character? after which God fixes that it shall be either one of the miserable or one of the blessed'—

يقول ان النطفة تقع في الرحم اربعين ليلة ثم يتصور عليها الملك قل زهير حسبته قال الذي يخلقها فيقول يا رب اذكر او انثى فيجعل الله ذكرا او انثى ثم يقول يا رب اسوى او غير سوى فيجعل الله سويا او غير سوى ثم يقول يا رب ما رزقه ما اجله ما خلقه ثم يجعل الله شقيا او سعيدا —

Returning to Bukhârî, we read as follows:

“Chapter of the Conclusiveness of Divine Knowledge (باب جَفّ) (الْقَلَمُ عَلَى عِلْمِ اللَّهِ).

“The fundamental idea of this chapter is that God exists in a single state of knowledge (وَاصِلُهُ اللَّهُ عَلَى عِلْمٍ). Says ‘Abû Hurairah: The

Prophet... said to me: ‘The pen of thy destiny is dry (جَفّ الْقَلَمُ) (بِمَا أَنْتَ لَا يِ)’, says ‘Ibn ‘Abbâs: She was prevented by those who were themselves prevented by those pronounced blessed (لَهَا سَابِقُونَ) (سَبَقَتْ لَهُمُ السَّعَاد).

“We are told as a tradition by ‘Adam, that Shu‘bah tells us, that Yazîd ‘ar-Rashik tells us, saying: I heard Mu‘tarriif Bin ‘Abdallâh Bin ‘ash-Shiklîkhîr tell as a tradition, on the authority of ‘Imrân Bin Hushain—may God be gracious to them both! saying: Said a certain man: O Messenger of God, does God distinguish those who are to be in Paradise from those who are to be in Hell? he replied: Yes; said the other: To what purpose, then, do moral agents work? he replied: Every one works in accordance with his character, or as he is divinely furthered—

قَالَ رَجُلٌ بِرَسُولِ اللَّهِ أَيْعِزُّ أَهْلَ الْجَنَّةِ مِنْ أَهْلِ النَّارِ قَالَ نَعَمْ قَالَ فَلِمَ يَعْمَلُ الْعَامِلُونَ قَالَ كُلٌّ يَعْمَلُ لِمَا خُلِفَ لَهُ أَوْ لِمَا يَسَّرَ لَهُ —

The parallel traditions recorded by Muslim are the following:

“Every one is Furthered according to his Character (كُلٌّ مَنِيسَّرٌ لِمَا) (خُلِفَ لَهُ).

“We are told as a tradition by ‘Uthmân Bin ‘Abî Shaibah, Zuhair Bin Harb, and ‘Ishâk Bin ‘Ibrâhim, saying, to use the words of Zuhair (‘Ishâk has أنا, while the two others have نَا): We are informed by Jarîr, on the authority of Mansûr, on the authority of Sa’d Bin ‘Ubaidah, on the authority of ‘Abû ‘Abd-ar-Rahmân, on the authority of ‘Ali—to whom may God be gracious! saying: We were at a funeral in the Bakî ‘al-Gharkâd, when the Messenger of God... came to us and sat down, and we sat down around him—he having by him a staff (مُخَصَّصَةً); so he leaned over and began to strike the ground with the end of his staff, and said: ‘There is no one of you—there is no soul born whose place, whether Paradise or Hell, has not been predetermined by God, and which has not been registered beforehand as either miserable or blessed.’ Thereupon, says the reporter, a certain man said: O Messenger of God, shall we not, then, await our registered destiny, and let conduct alone? to which he replied: ‘Whosoever is destined to felicity, will set himself to the conduct of the blessed; and whosoever is destined to misery, will set himself to the conduct of the miserable,’ and added: ‘Work ye, seeing that every one is divinely furthered: as for those destined to felicity, they are furthered to the conduct of the blessed; and as for those destined to misery, they are furthered to the conduct of the miserable.’ Afterwards he read the

verse 'Those who are liberal, and fear God, and recognize virtue as a reality, we will help forward to felicity; and those who are parsimonious, and seek gain, and charge virtue with pretence, we will help forward to perdition'—

قال ما منكم من احد ما من نفس منقوسة الا وقد كتب الله مكانها من الجنة والنار والا وقد كتبت شفيع او سعيده قال فقال رجل يا رسول الله افلا نمكث على كتابنا وندع العمل فقال من كان من اهل السعادة فسيصير الى عمل اهل السعادة ومن كان من اهل الشقاوة فسيصير الى عمل اهل الشقاوة فقال اعملوا وكل ميسر اما اهل السعادة فييسرون لعمل اهل السعادة واما اهل الشقاوة فييسرون لعمل اهل الشقاوة ثم قرأ فاما من اعطى وصدق بالحسنى فسييسره لليسر واما من بخل واستغنى وكذب بالحسنى فسييسره للعسر —

"We are told as a tradition by 'Abū Bakr Bin Abi Shaibah, Zuhair Bin Harb, and 'Abū Sa'īd 'al-'Ashajj, saying: We are informed by Waki', as follows; and we are told as a tradition by 'Ibn Numair, saying: We are informed by my father; both of whom [i. e., Waki' and the father of 'Ibn Numair] say: We are informed by 'al-'A'mash, as follows; and we are told as a tradition by 'Abū Kuraib, to use his words: We are informed by 'Abū Mu'āwiyah, that 'al-'A'mash informs us, on the authority of Sa'd Bin 'Ubaidah, on the authority of 'Abū 'Abd-'ar-Rahmān 'as-Sulamī, on the authority of 'Alī—to whom may God be gracious! saying: the Messenger of God . . . was seated on a certain day, having in his hand a staff (عود), with which he kept striking the ground: so he raised his head, and said: 'There is no soul of you whose abiding-place, whether Paradise or Hell, is not known beforehand;' to which those addressed replied: O Messenger of God, to what purpose, then, do we work?—if this is so, shall we not resign ourselves to God? the Prophet answered: 'Nay, work ye, for every one is divinely furthered in accordance with his character.' Afterwards he read the verse 'Those who are liberal, and fear God, and recognize virtue as a reality,' and so on to the words 'we will help forward to perdition'—

فقال ما منكم من نفس الا وقد علم منزلها من الجنة والنار قالوا يا رسول الله فلم نعمل افلا نتكل قال لا اعملوا فكل ميسر لما خلق له ثم قرأ . . .

"We are told as a tradition by 'Ahmad Bin Yūnus, that Zuhair informs us, that 'Abu-z-Zubair informs us as follows; and we are told as a tradition by Yahya Bin Yahya, that 'Abū Khaithamah informs us, on the authority of 'Abu-z-Zubair, on the authority of Jābir, saying: Su-

* Kūrān, xcii[xvi]. 5-10.

rākah Bin Mālik, son of Ju'sham, came, and said: O Messenger of God, explain to us our religious condition—was it unchangeably written, and predetermined, that we should be so disposed as we are, at this time, touching present conduct, or, on the other hand, is our character a casual incident? to which the Prophet replied: 'Not so, but rather was it unchangeably written thus, and predetermined;' the other rejoined: What, then, avails conduct? Zuhair adds: Afterwards, 'Abu-z-Zubair said something which I did not understand; so I inquired what the Prophet said, and he replied: 'Work ye, for every one is divinely furthered'—

قال يا رسول الله بين لنا ديننا كأننا خلقنا الآن فيما العمل اليوم أفيما جئت به الأقدام وجرت به المقادير أم فيما نستقبل قل لا بل فيما جئت به الأقدام وجرت به المقادير قال فقيم العمل قال زهير ثم تكلم أبو الربيع بشئ لم أفهمه فسألت ما قال فقال اعملوا فكل ميسر —

"I am told as a tradition by 'Abu-t-Tāhir, that 'Ibn Wahb informs us, saying: I am informed by 'Amrū Bin 'al-Hārith, on the authority of 'Abu-z-Zubair, on the authority of Jābir Bin 'Abdallāh—may God be gracious to them both! on the authority of the Prophet... of a tradition to the same intent as the foregoing, in which it is said: Then said the Messenger of God... 'Every moral agent is furthered to his own conduct' (كل عامل ميسر لعمله).

"We are told as a tradition by Yahya Bin Yahya, that Hammād Bin Zaid informs us, on the authority of Yazīd 'adh-Dhūbā'i, that Mutarrif informs us, on the authority of 'Imrān Bin Ḥusain—to whom may God be gracious! saying: Some one said: O Messenger of God, are those who are to be in Paradise distinguished from those who are to be in Hell? to which, says the reporter, the Prophet replied: 'Yes;' when the other rejoined: To what purpose then do moral agents work? and the Prophet answered: 'Every one is divinely furthered in accordance with his character (كل ميسر لما خلق له)."

"We are told as a tradition by 'Ishāq Bin 'Ibrāhīm 'al-Hanzali, that 'Uthmān Bin 'Umar informs us, that 'Azrah Bin Thābit informs us, on the authority of Yahya Bin 'Ukail, on the authority of Yahya Bin Ya'mar, on the authority of 'Abu-l-'Aswad 'ad-Dili, saying: I was addressed by 'Imrān Bin Ḥusain as follows: Thinkest thou that what men now do, and endeavor after, is something determined for them, and which a preventing predestination made it previously necessary that they should do? or are their actions casual incidents, consequent upon what their Prophet has announced to them, and their proved obligations? Then said I: Nay, the actions of men are determined for them, and made previously necessary to be done by them; whereupon the other, as the reporter goes on to say, rejoined: Is there no such thing as wrong-doing? at which, continues the reporter, I was greatly

alarmed, and said: All things are of God, and subject to his controlling hand; 'so then his doing shall not be questioned—it is they who shall be inquired of.'* Then he said to me: God have mercy on thee! I intended, by what I asked thee, only to measure thine understanding; there came to the Messenger of God . . . two men of Muzainah, and said: O Messenger of God, dost thou think that what men now do, and endeavor after, is something determined for them, and which a preventing predestination previously assigned to them? or are their actions casual incidents, consequent upon what their Prophet has announced to them, and their proved obligations? to which he replied: 'Not so, but rather are the actions of men determined for them, and previously assigned to them; and a verification of this is the following from the Book of God: "and by a soul, with God's fashioning it to completeness, and inspiring it with its wickedness and its piety"'+—

قال نال لى عمران بن حصين أرأيت ما يعمل الناس اليوم وكدحون فيه
أشئ قضى عليهم ومضى عليهم من قدر ما سبق أو فيما يستقبلون به
مما آتاهم به نبيهم ونبت به أئجة عليهم فعلت بل سى قضى عليهم ومضى
عليهم قال فقال أفلا يكون ظلماً دل ففزع من ذلك فزعاً شديداً وقلت كل
شئ خلق الله وملك به فلا بسبيل عما يفعل وهم يسألون فقال لى مرحمك
الله أتى لم أر د بما سألك إلا لآحر علك ان رجلاً من مؤمنة اتيا رسول
الله صلى الله عليه وسلم فقال يا رسول الله أرأيت ما يعمل الناس اليوم
وكدحون فيه أشئ قضى عليهم ومضى عليهم من قدر قد سبق أو
فيما يستقبلون به مما آتاهم به نبيهم ونبتت أئجة عليهم فقال لا بل
شئ قضى عليهم ومضى عليهم وتصديق ذلك فى كتاب الله ونفس
وما سواها فآلهمها فجورها وتقواها —

"We are told as a tradition by Kutaibah Bin Sa'id, that 'Abd-al-'Aziz, meaning the son of Muhammad, informs us, on the authority of 'al-'Alâ', on the authority of his father, on the authority of 'Abû Hurairah—to whom may God be gracious! that the Messenger of God . . . said: 'A man may even for the greater part of his life conduct himself as do those destined to Paradise, and for all that be fixed to act after the manner of those destined to Hell; and a man may even for the greater part of his life conduct like those destined to Hell, and for all that be fixed to act like those destined to Paradise'"—

قال ان الرجل ليعمل الزمن الطويل بعمل اهل الجنة ثم يختمر له عمله
بعمل اهل النار وان الرجل ليعمل الزمن الطويل بعمل اهل النار ثم يختمر
عمله بعمل اهل الجنة —

* Kur., xxi[lxv]. 23.

† Kur., xcix[xiii]. 7-8.

"We are told as a tradition by Kutaibh Bin Sa'id, that Ya'kub, meaning the son of 'Abd-ar-Rahmân 'al-Kâri, informs us, on the authority of 'Abû Hâzim, on the authority of Sahl Bin Sa'd 'as-Sâ'idî—to whom may God be gracious! that the Messenger of God ... said: 'A man may even exemplify the conduct which leads to Paradise, as respects appearance to men, while yet he is one destined for Hell; and a man may even exemplify the conduct leading to Hell, as respects appearance to men, while yet he is one destined for Paradise'"—

قال ان الرجل ليعمل عمل الجنة فيما يبدو للناس وهو من اهل النار وان
الرجل ليعمل عمل النار فيما يبدو للناس وهو من اهل الجنة —

We have next from Bukhârî the following chapter:

"Chapter of the saying 'God best knows what would have been their conduct.'

"We are told as a tradition by Muḥammad Bin Bashshâr, that Ghundar tells us, that Shu'bah tells us, on the authority of 'Abû Bishr, on the authority of Sa'id Bin Jubair, on the authority of 'Ibn 'Abbâs—may God be gracious to them both! as follows: The Prophet ... was inquired of respecting the children (أولاد) of idolaters; whereupon he said: 'God best knows what would have been their conduct (أله أعلم بما كانوا عاملين).'"

"We are told as a tradition by 'Ishâk, that 'Abd-ar-Razzâk informs us, that Ma'nar informs us, on the authority of Hammâm, on the authority of 'Abû Hurairah—to whom may God be gracious! saying: Said the Messenger of God ... 'No one is born who is not born religiously constituted, so that it is one's parents who make him to be either a Jew or a Christian; like as ye take up the beast at its birth—do ye find upon it any mutilation, until ye yourselves mutilate it?' to which it was replied: O Messenger of God, hast thou then in mind those who die in infancy? and the Prophet returned for answer: 'God best knows what would have been their conduct'"—

قال رسول الله صلى الله عليه وسلم ما من مولود الا يولد على الفطرة فأبواه
يهودانه وينصرانه لما تنتجون البهيمة هل تجدون فيها من جدعاء حتى
تكونوا انتم تجدعونها قالوا يوسول الله افرأيت من يموت وهو صغير قال
الله أعلم بما كانوا عاملين —

The following parallel chapter is from Muslim:

"Chapter of the saying 'Every one born is born religiously constituted.'

"We are told as a tradition by Hâjib Bin 'al-Walid, that Muḥammad Bin Harb informs us, on the authority of 'az-Zubaidî, on the authority

of 'az-Zuhri, saying: I am informed by Sa'id Bin 'al-Musaiyab, on the authority of 'Abû Hurairah—to whom may God be gracious! that he was wont to say: The Messenger of God ... said: 'No one is born who is not born religiously constituted, it being one's parents who make him a Jew, or a Christian, or a Magian; like as the beast brings to birth an unmutated beast—do ye discover thereupon any mutilation?' after which 'Abû Hurairah would add: And read ye, if ye will, the verse '[set, then, thy face to the true religion, as one converted,] to God's religion in the constitution of man, to which their nature leads men—let there be no perversion of God's creative work'* and so on"—

قال رسول الله صلى الله عليه وسلم ما من مولود الا يولد على الفطرة ابواه يهودانه وينصرانه ويمجسانه كما تنتج البهيمة بهيمة جمعاء هل تحسون فيها من جدعاء ثم يقول ابو عريبة واهراءوا ان شئتم فطره الله التى فطر الناس عليها لا تبديل لخلق الله الاية —

"We are told as a tradition by Zuhair Bin Harb, that Jarir informs us, on the authority of 'al-A'mash, on the authority of 'Abû Sâlih, on the authority of 'Abû Hurairah—to whom may God be gracious! saying: The Messenger of God ... said: 'No one is born who is not born religiously constituted, so that it is one's parents who make him a Jew, or a Christian, or an idolater;' then said a certain man: O Messenger of God, hast thou in view the case of one who has died before being taught: to which the Prophet replied: 'God best knows what would have been their conduct'"—

قال ... ما من مولود الا يولد على الفطرة فأبواه يهودانه وينصرانه وبشركانه فعال رجل با رسول الله أرأيت لو مات فبيل ذنك قال الله اعلم بما كانوا عاملين —

"We are told as a tradition by 'Abû Bakr Bin 'Abi Shaibah and 'Abû Kuraib, saying: We are informed by 'Abû Mu'awiyah as follows; and we are told as a tradition by 'Ibn Numair, saying: I am told as a tradition by my father (the tradition, in either form, being on the authority of 'al-A'mash, and sustained like the foregoing—كلنا عن كذا), saying, as it is in the tradition of 'Ibn Numair: 'No one is born who is not born religious;' or, as the expression is in the report of 'Abû Bakr, on the authority of 'Abû Mu'awiyah: '... who is not born of this religion'—whereby the reporter intended to make plain the language of the tradition; or, as it is expressed in the report of 'Abû Kuraib, on the authority of 'Abû Mu'awiyah: 'No one is born who is not born constituted of this religion'—by which the reporter meant to interpret the language of the tradition"—

ما من مولود يولد الا وهو على الفطرة ... الا على هذه الفطرة ... ليس
من مولود يولد الا على هذه الفطرة ... —

"We are told as a tradition by Kutaibah Bin Sa'id, that 'Abd-'al-'Aziz, meaning 'ad-Darāwardi, informs us, on the authority of 'al-'Alā', on the authority of his father, on the authority of 'Abū Hurairah—to whom may God be gracious! that the Messenger of God ... said: 'Every man is brought forth by his mother religiously constituted—it is his parents who make him, afterwards, a Jew, or a Christian, or a Magian; but, if they are Muslims, he is a Muslim. Every man whom his mother brings forth is buffeted on both sides by Satan, excepting Maryam and her son'—"

قال كل انسان تلده أمه على الفطرة ابواه بعد بهودانه ونصرانه او يمجسانه
فان كانا مسلمين فسلم كل انسان تلده أمه يلدن الشيطان في حصنيه
الا مريم وابنها —

"I am told as a tradition by 'Abu-t-Tāhir, that 'Ibn Wahb informs us, saying: I am informed by 'Ibn 'Abi Dhī'b and Yūnus, on the authority of 'Ibn Shihāb, on the authority of 'Atā' Bin Yazid, on the authority of 'Abū Hurairah—to whom may God be gracious! that the Messenger of God was inquired of respecting the children (أولاد) of idolaters; whereupon he said: 'God best knows what would have been their conduct'—"

ان رسول الله ... سيئل عن اولاد المشركين فقال الله اعلم بما كانوا
عاملين —

"We are told as a tradition by Yahya Bin Yahya, that 'Abū 'Awānah informs us, on the authority of 'Abū Bishr, on the authority of Sa'id Bin Jubair, on the authority of 'Ibn 'Abbās—may God be gracious to them both! saying: The Messenger of God ... was inquired of respecting the little children of idolaters; he replied: 'God best knows what would have been their conduct, since he created them'—"

سيئل رسول الله ... عن اطفال المشركين قال الله اعلم بما كانوا عاملين ان
خلقهم —

"We are told as a tradition by 'Abdallāh Bin Maslamah Bin Ka'nab, that Mu'tamir Bin Sulaimān informs us, on the authority of his father,

* i e., the Virgin Mary and Jesus.

† We here omit two traditions, which vary from the last only by substituting "offspring of idolaters," or ... اطفال "little children of ...," "أولاد ..."

on the authority of Raḳabah Bin Maṣḳalah, on the authority of 'Abū 'Ishāq, on the authority of Sa'id Bin Jubair, on the authority of 'Ibn 'Abbās, on the authority of 'Ubayi Bin Ka'b—to whom may God be gracious! saying: 'As for the boy whom 'al-Khadhir slew,* he was sealed for an infidel, and, if he had survived, would have made trouble for his parents by disobedience and unbelief'”—

قال رسول الله ... ان الغلام الذى قتله الخضر طبع كافرا ولو عاش لارهق
ابويه ضغيانا وكفرا —

Resuming the thread of Bukhārī's collection, we come to the following chapters:

"Chapter of the clause 'and God's ordering is in accordance with a determined decree (وكان امر الله قدرا مقدورا)."⁴

"We are told as a tradition by 'Abdallāh Bin Yūsuf, that Mālik informs us, on the authority of 'Abu-z-Zinād,† on the authority of 'al-'A'raj, on the authority of 'Abū Hurairah—to whom may God be gracious! saying: The Messenger of God said: 'Let not a woman ask that her sister be divorced, because she herself is solicitous for her own maintenance, and anxious to be married; for she will have what is decreed to her'"—

قل رسول الله ... لا تسبيل المرأة طلاق اختها لتستفرغ صحتها ولتنكح
فان لها ما قدر لها —

"We are told as a tradition by Mālik [Bin] 'Isrā'īl, that 'Isrā'īl tells us, on the authority of 'Āsim, on the authority of 'Abū 'Uthmān, on the authority of 'Usamah—to whom may God be gracious! saying: I was present with the Prophet ... when there came to him a messenger on the part of one of his daughters (Sa'd, 'Ubayi Bin Ka'b, and Mu'ādh being also present with him), to say that her son was at the point of death; whereupon the Prophet sent her this message: 'To God belongs both what he takes away and what he grants; every one has a fixed term of life; be thou, then, patient, and consider'"—

فبعث اليها له ما اخذ ولله ما اعطى دل بأجل فلتصبر ولتحتسب —

"We are told as a tradition by Ḥibbān Bin Mūsa, that 'Abdallāh informs us, that Yūnus informs us, on the authority of 'az-Zuhri, saying: I am informed by 'Abdallāh Bin Muḥaiyir-riz 'aj-Jumahl, that he was informed by 'Abū Sa'id 'al-Khudrī, that, while he was sitting with the Prophet ... there came a man who was one of the Helpers, and said: O Messenger of God, we are taking a woman captive, and prefer the money—what thinkest thou as to [the necessity of] the public deposit in pledge? to which the Messenger of God ... replied: 'Is your doing so a

* s. Kur., xviii[lxix]. 73-5, and comp. v. 79.

† Kur., xxxiii[ciii]. 28.

‡ MS. has *الزندان*.

fact?—then it rests not upon you that ye do not so;* not a breath of life, of which God has written down that it should go forth, fails to be”—

فَقَالَ يَرْسُولُ اللَّهِ أَنَا نَصِيبُ سَيِّئَةٍ وَحَبَّ الْمَالِ كَيْفَ تَرَى فِي الْعَزْلِ فَقَالَ رَسُولُ اللَّهِ ... أَوَأَنْتُمْ تَفْعَلُونَ ذَلِكَ لَا عَلَيْكُمْ أَنْ لَا تَفْعَلُوا فَإِنَّهُ لَيْسَتْ نَسْمَةٌ كَتَبَ اللَّهُ أَنْ تَخْرُجَ إِلَّا هِيَ كَايْنَةٌ —

“We are told as a tradition by Mûsa Bin Mas'ûd, that Sufyân tells us, on the authority of 'al-'A'mash, on the authority of 'Abû Wâ'il, on the authority of Hudhaifah—to whom may God be gracious! saying: The Prophet ... addressed to us a discourse in which, even to the pomp of the resurrection-hour, he omitted not to speak of any thing which whoever has knowledge of knows for certain, and whoever is ignorant of is positively ignorant of;† should it be my lot to see what he told us, without having borne it in mind, then shall I recognize that which a man recognizes from whom something has been hidden, which he afterwards sees and recognizes”—

لَقَدْ خَطَبَنَا النَّبِيُّ ... خُطْبَةً مَا تَرَى فِيهَا شَيْئًا إِلَى فَيَا السَّاعَةِ إِلَّا ذَكَرَهُ عِلْمُهُ مِنْ عِلْمِهِ وَجْهَهُ مِنْ جِوْهَرِهِ أَنْ نَنْتَ لَارَى الشَّيْءِ قَدْ نَسِيتَ فَاعْرِفْ مَا يَعْرِفُ الرَّجُلُ إِذَا غَابَ عَنْهُ قَعْرُهُ —

“We are told as a tradition by 'Abdân, on the authority of 'Abû Hamzah, on the authority of 'al-'A'mash, on the authority of Sa'd Bin 'Ubadah, on the authority of 'Abû 'Abd-ar-Rahmân 'as-Sulamî, on the authority of 'Alî—to whom may God be gracious! saying: We were seated with the Prophet ..., who had by him a staff with which he kept striking the ground, when he said: ‘There is no one of you whose place of abode, whether Hell or Paradise, is not already prescribed;’ whereupon a man of the company said: O Messenger of God, shall we not resign ourselves to God? and the Prophet replied: ‘Nay, work ye; for every one is divinely furthered;’ after which he read the verse ‘Those who are liberal, and fear God,’ and so on”—

وَقَالَ مَا مِنْكُمْ مِنْ أَحَدٍ لَا فِدَ تَنْبِ مَفْعَدَةٍ مِنَ النَّارِ أَوْ مِنَ الْجَنَّةِ فَقَالَ رَجُلٌ مِنَ الْقَوْمِ لَا تَنْتَدِلُ يَرْسُولُ اللَّهِ قُلْ لَا أَعْمَلُوا فَكُلَّ مَيْسَرٍ ثُمَّ فَرَأَ فَمَا مِنْ أَعْطَى وَاتَّقَى الْآيَةَ —

“Chapter of Moral Conduct as settled by Final Manifestations (باب (العمل بالخواتم).

“We are told as a tradition by Hibbân Bin Mûsa, that 'Abdallâh informs us, that Ma'mar informs us, on the authority of 'az-Zuhri, on the

* i. e., if a capture has been once made, the responsibility to the public treasury for it is not to be evaded: once a fact, always a fact.

† i. e., all those events of the future which, constituting the secret counsel of God, can be known only by divine revelation.

authority of Sa'id Bin 'al-Musaiyab, on the authority of 'Abū Hurairah—to whom may God be gracious! saying: We were present with the Messenger of God ... at Khaibar, when the Messenger of God ... said of a man in his company who loudly professed to be a Muslim: 'This is one of those destined for Hell;' but, after the battle had come on, the man fought most vehemently, and got so many wounds that he was brought to a stand; whereupon there came one of the Companions of the Prophet ... and said: O Messenger of God, hast thou seen the man whom thou didst announce to be destined for Hell?—he has just been fighting most vehemently in the cause of God, so as to get many wounds; to which the Prophet replied: 'Is it not so, that he is one of those destined for Hell?' At this some of the Muslims were almost disconcerted; meanwhile, however, the man, having received a most severe wound, reached with his hand to his quiver, and drew thence an arrow, which he stuck into his throat. Then came certain men of the Muslims in all haste to the Messenger of God ... and said: O Messenger of God, God hath verified thy declaration—such a one has just pierced his throat, and killed himself; whereupon the Messenger of God ... uttered these words: 'O Bilāl, rise and call to prayer; no one but a believer shall enter Paradise, nor is it consistent for God to use the instrumentality of a wicked man for the succor of our religion'—

فقال رسول الله ... لرجل ممن معه يدعى الاسلام هذا من اهل النار فلما حضر القتال قاتل الرجل من اشد القتال وكثرت به الجراح فانبتته ثجاء رجل من اصحاب النبي ... فقال يرسل الله ارايت الرجل الذي تحدثت انه من اهل النار قد قاتل في سبيل الله من اشد القتال فكثرت به الجراح فقال النبي ... أما انه من اهل النار فكاد بعض المسلمين يرناب فيبينما هم على فلكه ان وجد الرجل الم الجراح فاهوى بيده الى كنانته فانتزع منها سهما فاختار بها فاشتد رجال من المسلمين الى رسول الله ... فقالوا يرسل الله صدق الله حديثك قد انتحر فلان فقتل نفسه فعال رسول الله ... يا بلال قم فاذن لا يدخل الجنة الا مؤمن وان الله ليؤيد هذا الدين بالرجل الفاجر —

"We are told as a tradition by Sa'id Bin 'Abī Maryam, that 'Abū Ghassān tells us, saying: I am told by 'Abū Hāzim, on the authority of Sahl—to whom may God be gracious! that a certain man, most forward among those who professed islamism, without being in any way dependent upon the Muslims, was on a foray which he made in company with the Prophet ... when the Prophet ... looked at him and said: 'Whoever would like to look upon a man who is destined for Hell, let him regard this man;' whereupon one of the company followed after him (he being at that very time engaged in most vehement conflict with the idolaters), until, having been wounded, the man desired to hasten his death, and so pressed the sharp point of his sword into the middle of his breast, until it came out between his shoulder-blades. Then the

one who had followed after him went in haste to the Prophet ... and said: I bear witness that thou art the Messenger of God; to which the Prophet replied: 'What does that mean?' said the man: Thou didst say of such a one 'Whoever would like to look upon a man who is destined for Hell, let him regard him;' now he was one of the most forward among us, without being in any way dependent upon the Muslims, but I own that he died not in the faith, for, having been wounded, he desired to hasten his death, and so has killed himself. Thereupon said the Prophet: 'A man may even conduct like one destined for Hell, although he be destined for Paradise; and may even conduct like one destined for Paradise, although he be destined for Hell; and moral conduct is settled only by its final manifestations'—

ان العبد ليعمل عمل اهل النار وانه من اهل الجنة ويعمل عمل اهل الجنة وانه من اهل النار وانما الاعمال بالخواصير —

"Chapter that Vowing to God turns a Man over to Predestination (باب الفداء النذر العبد الى القدر).

"We are told as a tradition by 'Abû Nu'aim, that Sufyân tells us, on the authority of Manṣûr, on the authority of 'Abdallâh Bin Murrah, on the authority of 'Ibn 'Umar—may God be gracious to them both! saying: The Prophet ... forbade vowing to God—he said: 'It profits nothing; only from an avaricious being does one gain by vows!'"—

قال نهى النبي . . . عن النذر قال انه لا يرد شيئا وانما يستخرج به من البخيل —

"We are told as a tradition by Bishr Bin Muhammad, that Ma'mar informs us, on the authority of Hammâm Bin Munabbih, on the authority of 'Abû Hurairah—to whom may God be gracious! on the authority of the Prophet ... saying: 'Vowing to God brings the son of Adam nothing which I have not fore-ordained, but turns him over to predestination for that which I have fore-ordained for him—it is from an avaricious being that one gets any thing by vows'"—

قال لا يات ابن ادم النذر بشئ لم يكن قد قدرته ولكن يلقيه الى القدر وقد قدرته له استخرج به من البخيل —

"Chapter of the saying 'There is no power, nor strength, but through God.'

"I am told as a tradition by Muhammad Bin Mukâtil 'Abu-l-Hasan, that we are informed by 'Abdallâh, that we are informed by Khâlid 'al-Hadhdhâ', on the authority of 'Abû 'Uthmân 'an-Nahdî, on the authority of 'Abû Mûsa—to whom may God be gracious! saying: We were with the Messenger of God ... on a foray; now he had enjoined upon us not to ascend any rising ground, nor go over an eminence, nor descend into any water-course, without raising the cry of 'Allâh 'akbar; so then, proceeds the reporter, the Messenger of God ... approached some of us, and said: 'O men, restrain yourselves; for ye call not upon one who

is deaf, nor upon one at a distance—it is only a hearing and seeing God whom ye invoke;’ after which he added : ‘O ‘Abdallāh Bin Kaïs, shall I not make you acquainted with a saying which is one of the treasures of Paradise, namely, “There is no power, nor strength, but through God (لا حول ولا قوة الا بالله).”’

“Chapter of the saying ‘He is secured whom God secures.’

“A securer (عاصم) is one who keeps from any thing (مانع). Says Mujāhid : Being suffered to go at large, unrestrained by the truth, they fall into error (سدا عن الحق يتردون في الضلالة) * is equivalent to اغواها, ‘he led her astray.’

“We are told as a tradition by ‘Abdān, that ‘Abdallāh informs us, that Yūnus informs us, on the authority of ‘az-Zuhri, saying: I am informed by ‘Abū Salamah, on the authority of ‘Abū Sa’id ‘al-Khudri—to whom may God be gracious! on the authority of the Prophet . . . saying: ‘There is made to succeed no successor [in human descent] who has not two inclinations, one prompting him to good, and impelling him thereto, and the other prompting him to evil, and thereto impelling him; and he is secured whom God secures’”—

قال ما استخلف خليفة الا له بطانتان بطانة تأمره بالخير وتخصه عليه وبطانة تأمره بالشر وتخصه عليه والمعصوم من عصم الله —

“Chapter of the following passages: ‘There is a fixed decree that the people of any city which we destroy shall not repent (حرام على) (قربة اهلكناها انهم لا يرجعون); ‘No one of thy people will believe, excepting those who have already believed (انه لن يؤمن من قومك الا) (من قد آمن) nor will they beget other than impious, unbelieving offspring (ولا يلدوا الا فاجرا كفارا).’

“Says Mansūr Bin ‘an-Nu’mān: We are told as a tradition by ‘Ikrimah, on the authority of ‘Ibn ‘Abbās, that the reading وحرم was in the Abyssinian text.

“We are told as a tradition by Mahmūd Bin Ghailān, that ‘Abd ‘ar-Razzāk tells us, that Ma’mar informs us, on the authority of ‘Ibn Tā’us, on the authority of his father, on the authority of ‘Ibn ‘Abbās—may God be gracious to them both! saying: I think of nothing more like insanity than that which ‘Abū Hurairah says, on the authority of the Prophet . . . namely: ‘God fore-ordains for the son of Adam his measure

* A necessary correction of the reading of the MS., دساها.

† s. Kur., xxi[lxv]. 95; xi[lxxv]. 38; lxxi[li]. 28. Baidhāwī notices two interpretations of the word حرام in the passage first cited: 1. ممتنع على أهلها غير, which requires the translation “It is repugnant to (or, not imagined by) the people of any city, etc., that they will not come to repentance;” 2. عزم وموجب عليهم, according to which the passage has the meaning given to it in the text, which seems most pertinent to the contents of the chapter—s. Beidh. Comm., ed. Fleischer, i. 623-4.

of lewdness—to that he attains without fail; now lewdness of the eye consists in look; and of the tongue, in speech; and the soul desires and passionately craves, while the pudendum sanctions or repudiates the emotion”—

ان الله كتب على ابن ادم حظّه من الزناء ادرك ذلك لا محالة فزنا العين
النظر وزنا اللسان المنطق والنفس تمنى وتشتهى والفرج يصدق ذلك
ويكذبه —

This last tradition is also given by Muslim, under the heading باب كتب على ابن ادم حظّه من الزناء, i. e., Chapter of the Fore-ordaining for the Son of Adam of his Measure of Lewdness, with only two unimportant verbal variations: العيين for العين, and المنطق for النطق; after which he has the following:

“I am told as a tradition by ‘Ishāk Bin Mansūr, that ‘Abū Hishām ‘al-Makhzūmī informs us, that Wuhaib informs us, that Suhail Bin ‘Abī Ṣāliḥ informs us, on the authority of his father, on the authority of ‘Abū Hurairah—to whom may God be gracious! on the authority of the Prophet, saying: ‘The son of Adam has his measure of lewdness fore-ordained for him—to that he attains without fail; now lewdness of the eyes consists in look; and of the ears, in hearing; and of the tongue, in speech; and of the hand, in violence; and of the feet, in a straddling gait; and the heart loves and desires, while the pudendum sanctions or repudiates the emotion’”—

قال كتب على ابن ادم نصيبه من الزناء مدرك ذلك لا محالة فالعينان زناها
النظر والاذنان زناها الاستماع واللسان زناه الكلام واليد زناها البطش والرجل
زناها الخطى والقلب يهوى ويتمنى وبصدق ذلك الفرج ويكذبه —

Bukhārī continues:

“Chapter of the clause ‘and we appointed the vision which we caused thee to see, only as a trial for men.’”

“We are told as a tradition by ‘al-Humaidī, that Sufyān tells us, on the authority of ‘Amrū, on the authority of ‘Ikrimah, on the authority of ‘Ibn ‘Abbās—may God be gracious to them both! as follows: ‘And we appointed the vision which we caused thee to see, only as a trial for men,’ that is, the reporter adds, a veritable vision which the Messenger of God . . . was made to see on the night in which he was transported to the temple of Jerusalem”

وما جعلنا الرؤيا التي ارياك الا قننة للناس قال هي رؤيا عيني اريها رسول
الله . . . ليلة اسرى به الى بيت المقدس —

"Chapter of the Dispute between Adam and Moses in the Presence of God.

"We are told as a tradition by 'Alī Bin 'Abdallāh, that Sufyān tells us, saying: We committed to memory the following, at the dictation of 'Amrū, on the authority of Tā'us, namely: I heard 'Abū Hurairah—to whom may God be gracious! say, on the authority of the Prophet . . . : 'Adam and Moses disputed with each other. Said Moses: O Adam, it is thou, our father, who didst frustrate our destiny, and eject us from Paradise; to whom Adam replied: O Moses, thou art he whom God did specially favor with converse with himself, and for whom he traced lines of writing with his own hand—dost thou blame me for doing what God predestined for me forty years before he created me? Therefore Adam got the better of Moses in the dispute; and so did Adam three times get the better of Moses"—

قال اُحتج آدم وموسى فقال موسى يا ادم انت ابونا خيبتنا واخرجتنا من الجنة قال له ادم يا موسى انت اصطفاك الله بكلامه وخط لك بيده اتلومني على امر قدّر الله عليّ قبل ان يخلقني باربعين سنة فحجّ ادم موسى فحجّ ادم موسى ثلاثا —

Here we have to insert a parallel chapter from Muslim, as follows:

"Chapter of the Dispute between Adam and Moses—may the benediction and peace of God rest upon them both!

"I am told as a tradition by Muhammad Bin Hātim, 'Ibrāhīm Bin Dinār, 'Ibn 'Abī 'Umar 'al-Makkī, and 'Ahmad Bin 'Abdah 'adh-Dhabbi—by all, on the authority of 'Ibn 'Uyainah, saying, to use the words of 'Ibn Hātim and 'Ibn Dinār: We are informed by Sufyān Bin 'Uyainah, on the authority of 'Amrū, on the authority of Tā'us, saying: I heard 'Abū Hurairah—to whom may God be gracious! say: The Messenger of God . . . said: 'Adam and Moses disputed with each other. Said Moses: O Adam, it is thou, our father, who didst frustrate our destiny, and eject us from Paradise; to whom Adam replied: It is thou, O Moses, whom God did specially favor with converse with himself, and for whom he traced lines of writing with his own hand—dost thou blame me for doing that which God predestined for me forty years before he created me? Therefore Adam got the better of Moses in the dispute; and so did Adam [three times*] get the better of Moses.' In the tradition as given by 'Ibn 'Abī 'Umar and 'Ibn 'Abdah, we have, in the words of the one, '[It is thou] for whom he traced (خطّ),' and, in the words of the other, 'for whom he wrote (كتب), the Law, with his hand.'"

"We are told as a tradition by Kūtaibah Bin Sa'id, on the authority of Mālik Bin 'Anas, in that which was read to him for his correction

* ثلاثا being supplied in the printed text.

(فيما قرئ عليه), on the authority of 'Abu-z-Zinād, on the authority of 'al-'A'raj, on the authority of 'Abū Hurairah—to whom may God be gracious! that the Messenger of God . . . said: 'Adam and Moses—peace be to them both! disputed with each other, and Adam got the better of Moses. Said Moses to him: It is thou, Adam, who didst spoil mankind of their rectitude, and eject them from Paradise; to which Adam replied: Thou art he to whom God gave the knowledge of all things, and whom he favored above all men as his Messenger; and Moses said: So it is; and Adam rejoined: Thou, then, blamest me for doing that which was fore-ordained for me before I was created?"—

قال تحاجّ ادم وموسى عليهما السلام فتحجّ ادم موسى فقال له موسى أنت ادم الذي اغويت الناس واخرجتهم من الجنة فقال ادم انت الذي اعطاه الله علم كل شئ واصطفاه على الناس برسالته قال نعم قال فتلومني على امر قدّر عليّ قبل ان اخلق —

"We are told as a tradition by 'Ishāk Bin Mūsā Bin 'Ubaidallāh Bin Mūsā 'al-'Anṣārī, that 'Anas Bin 'Iyādh informs us, saying: I am told as a tradition by 'al-Hārith Bin 'Abī Dhubāb, on the authority of Yazid, that is, the son of Hurmuz, and by 'Abd-'ar-Rahmān 'al-'A'raj, saying: We heard 'Abū Hurairah—to whom may God be gracious! say: The Messenger of God . . . said: 'Adam and Moses—peace be to them both! disputed with each other in the presence of their Lord, and Adam got the better of Moses. Said Moses: Thou, Adam, art he whom God created with his hand, and into whom he breathed of his spirit, and whom he caused his angels to do homage to, and made to dwell peacefully in his Garden; and after all, thou by thy crime didst lay prostrate the race of man; to which Adam—peace be to him! replied: It is thou, Moses, whom God specially favored as his Messenger, and to whom he granted special converse with himself, and gave the tablets containing an explanation of all things, and whom he made to come near, to himself as a confidant—tell me, then, how long thou hast found it to be, before I was created, that God wrote the Law; Moses answered: Forty years; and Adam continued: Hast thou, then, found it written in the Law that Adam disobeyed his Lord, and lost his rectitude; to which Moses replied: Even so; and Adam said: Dost thou, then, blame me on account of my conducting as God prescribed for me that I should, forty years before he created me? Therefore, added the Messenger of God . . . did Adam get the better of Moses?"—

قال رسول الله . . . احتجّ ادم وموسى عليهما السلام عند ربهما فتحجّ ادم موسى قال موسى انت ادم الذي خلقك الله بيده ونفخ فيك من روحه واسجد لك ملائكته واسكنك في جنته ثم اهبطت الناس بخطيئتك الى الارض قال ادم عليه السلام انت موسى الذي اصطفاك الله برسالته وبكلامه

واعضاءك الالواح فيها تبليان كل شى وقربك نجيبا فيكم وجدت الله كتب
التورة قبل ان اخلف قال موسى باربعين عاما قال ادم فهل وجدت فيها
وعصى ادم ربه فغوى قال نعم قال افتلومنى على ان عملت عملا كتبه الله
على ان اعمله قبل ان يخلقنى باربعين سنة قال رسول الله . . . فحج آدم
موسى —

"I am told as a tradition by Zuhair Bin Harb, and 'Ibn Hātim, saying: We are informed by Ya'kūb Bin 'Ibrāhīm, saying: We are informed by my father, on the authority of 'Ibn Shihāb, on the authority of Humaid Bin 'Abd-'ar-Rahmān, on the authority of 'Abū Hurairah—to whom may God be gracious! saying: Said the Messenger of God . . . 'Adam and Moses disputed with each other. Moses said to Adam: Thou art he whose crime ejected thee [and thy race in thee] from Paradise; to whom Adam replied: It is thou, Moses, whom God specially favored as his Messenger, and to whom he granted special converse with himself; and yet thou blamest me for doing that which was fore-ordained for me before I was created. Therefore Adam got the better of Moses'" —

قال رسول الله . . . احتج آدم وموسى فقال له موسى انت ادم الذى
اخرجتك خطيئتك من الجنة فقال له ادم انت موسى الذى اصطفاك
الله برسائنه وبكلامه ثم تلومنى على امر قد قدر على قبل ان اخلف فحج
ادم موسى —

Returning to Bukhārī, we read:

"Chapter of the saying 'There is no one to refuse that which God bestows.'

"We are told as a tradition by Muḥammad Bin Sinān, that Fulaih tells us, that 'Abdah Bin 'Abī Lubābah tells us, on the authority of Warrād, an intimate of 'al-Mughīrah Bin Shu'bah, saying: Mu'aiwah wrote to 'al-Mughīrah as follows: Write for me what thou didst hear the Prophet . . . say, after prayer. So some one set down in writing, for 'al-Mughīrah's correction (فاملى على المغيرة), the following: I heard the Prophet . . . , after prayer, say: 'There is no God but Allāh alone—he has no associate; O God, there is no one to refuse that which thou bestowest; and no one to grant that which thou refusest; nor does striving avail any one against thee'" —

سمعت النبى . . . يقول خاف الصلاة لا اله الا الله وحده لا شريك له اللهم
لا مانع لما اعطيت ولا معطى لما منعت ولا ينفع ذا الجحذ منك الجحذ —

"Chapter of Those who Take Refuge with God from the Vexation of Misfortune and the Ills of Destiny; and of the Divine Declaration 'Say

thou : I take refuge with the Lord of the dawn, from the evil of created things باب من تعوذ بالله من درك الشقاء وسوء القضاء وقوله تعالى قل أعوذ

*(يَرْبِّ الْفَلَقِ مِنْ شَرِّ مَا خَلَقَ).

"We are told as a tradition by Musaddid, that Sufyân tells us, on the authority of Suma, on the authority of 'Abû Sâlih, on the authority of 'Abû Hurairah—to whom may God be gracious! on the authority of the Prophet ... saying: 'Take ye refuge with God from the pressure of calamity, the vexation of misfortune, the ills of destiny, and the malice of enemies'"—

قال تعوذوا بالله من جهد البلاء ودرك الشقاء وسوء القضاء وشماتة

الاعداء —

This last chapter has its correspondent, in purport, in the following from Muslim :

"Chapter of the Command to be Strong, to Cease from Weakliness, to Ask Help of God, and to Leave Decrees to him (باب في الامر بالقوة) (وترك العجز والاستعانة بالله وتفويض المقادير اليه).

"We are told as a tradition by 'Abû Bakr Bin 'Abi Shaibah, and 'Ibn Numair, saying: We are informed by 'Abdallâh Bin 'Idris, on the authority of Rabi'ah Bin 'Uthmân, on the authority of Muḥammad Bin Yahya Bin Habbân, on the authority of 'al-'A'raj, on the authority of 'Abû Hurairah—to whom may God be gracious! saying: 'The Messenger of God ... said: 'The strong believer is better and more dear to God than one who is weak, and there is some good in every thing; eagerly seek to profit, ask help of God, and be not weakly; and, if any ill befalls thee, say not: Had it been my doing, it would have been so and so, but say: It is God's decree, and whatever he wills he does—that, indeed, for all thou mayest have set thyself to acting like Satan [by arrogating to thyself wisdom superior to God's]'—

قال رسول الله ... المؤمن القوى خير وأحب إلى الله من المؤمن الضعيف

وفي كل خير احرص على ما ينفعك واستعن بالله ولا تعجز وإن أصابك شئ

فلا تقل لو أني فعلت كان كذا أو كذا ولكن قل قدر الله وما شاء فعل

فإن لو تفتح عمل الشيطان —

Bukhârî continues as follows:

"Chapter of the clause 'God interposes between a man and his heart (باب يحول بين المرء وقلبه)."

"We are told as a tradition by Muhammad Bin Mukâtil 'Abu-l-Ḥasan, that 'Abdallâh informs us, that Mûsa Bin 'Ukbah informs us, on the authority of Sâlim, on the authority of 'Abdallâh—to whom may God be gracious! who frequently said: One of the customary oaths of the

Prophet . . . was: 'No, by him who turns hearts about (لا ومقلب القلوب)'—

Corresponding to this Muslim gives us the following:

"Chapter of God's Disposing of Hearts as He will (باب تصرف الله) (القلوب كيف شاء).

"I am told as a tradition by Zuhair Bin Ḥarb, and Ibn Numair—both reporting on the authority of 'al-Mukri'—saying, to use the words of Zuhair: We are informed by 'Abdallāh Bin Yazīd 'al-Mukri', that Ḥayāt informs us, saying: I am informed by 'Abū Ḥanīf', that he heard 'Abū Abd-'ar-Rahmān 'al Hubulī say, that he heard 'Abdallāh Bin 'ai-'Āṣ—may God be gracious to them both! say, that he heard the Messenger of God . . . say: 'All the hearts of the children of Adam are held between two fingers of the Merciful, as one heart, which he governs as he will;' after which the Messenger of God . . . said: 'O God, disposer of hearts, so govern our hearts that we may obey thee!'—

يقول أن قلوب بني آدم كلها بين أصبعين من أصابع الرحمن قلب واحد يصرفه كيف يشاء ثم قال رسول الله . . . اللهم مصرف القلوب صرف فلونا على شأنتك —

Bukhārī adds the following tradition:

"We are told as a tradition by 'Alī Bin Ḥafṣ, and Bishr Bin Muḥammad, saying: We are informed by 'Abdallāh, that Ma'mar informs us, on the authority of 'az-Zuhri, on the authority of Sālim, on the authority of 'Ibn 'Umar—may God be gracious to them both! saying: The Prophet said to 'Ibn Saiyād: 'Guess what my thought is,' to which the latter replied: The smoke; the Prophet . . . rejoined: 'Be gone, but not to exceed thy destiny;' said 'Umar: Permit me, and I will sever his neck; the Prophet replied: 'Let alone—if that is to be, the power to do it is not in thee; and if not to be, in vain wouldst thou kill him'—

قال النبي . . . خبأت لك خبيئاً قال الدخ قال أخساً فلن تعدو قدرك قال عمر أئذن لي فأضرب عنقه قال دعه أن يكن هو فلا تطيقه وإن لم يكن هو فلا خير لك في قتله —

Then come two chapters with which Bukhārī completes his collection of traditions on the subject before us:

"Chapter of the clause 'Say thou: There shall no evil befall us, but that which God fore-ordained for us (باب قل لن يصيبنا إلا ما كتب الله لنا) — (* being used in the sense of قضى).

"Says Mujāhid: Not seducers of, i. e., not leading astray, any but those whom God fore-ordained, i. e., predestined, to come to Hell; for

* Kur., ix[cxiii]. 51.

he guides by a predestination to misery as well as to felicity, and like as cattle are led to their pastures"—

قال مجاهد بغاتنيين بمضلين الا من كتب الله انه يصلى الجحيم قدر فهدى
قدر الشقاء والسعادة وهدى الانعام لمراعتها —

"It is a tradition of 'Ishâk Bin 'Ibrâhîm 'al-Hanzalî, that 'an-Nadhîr informs us, that Dâ'ud Bin 'Abî-l-Furât tells us, on the authority of 'Abdallâh Bin Baridâh, on the authority of Yahya Bin Ya'nur, that 'A'ishah—to whom may God be gracious! informed him, that she inquired of the Messenger of God . . . respecting pestilence; whereupon he said: 'It is a punishment inflicted by God upon whomsoever he pleases, but which God makes to be a mercy to believers: no mortal, being in a city where there is pestilence, who waits in the midst of it, not leaving the city, patient and collected, knowing that no evil will befall him but that which God fore-ordained for him—shall he not have a like reward with the martyr?'—

اخببرته انها سألت رسول الله . . . عن الطاعون فقال انه كان عذابا يبعثه الله على من نشاء فجعله الله رحمة للمؤمنين ما من عبد يكون في بلدة يكون فهو يكت في فيه لا يخرج من البلدة صابرا محتسبا يعلم انه لا يصيبه الا ما كتب الله له الا كان له مثل اجر شهيد —

"Chapter of the following clauses: 'and if God had not guided us, we should not have been directed;' 'if God had guided me, I should certainly have been one of those who fear him.'*

"We are told as a tradition by 'Abu-n-Nu'mân, that Jarîr, that is, Bin Hâzim, tells us, on the authority of 'Abû 'Ishâk, on the authority of 'al-Barâ' Bin 'Âzib—may God be gracious to them both! saying: I saw the Prophet . . . on the Day of the Ditch, carrying earth with us, when he said: 'By God! were it not for God, we should not have been directed, we should not have fasted, we should not have prayed. Do Thou, then, inspire us with a tranquil mind, and make firm our feet, that we may bear the onset of the idolaters who have defied us. Hard is it for us, when God is pleased to try us! In the name of God, the Merciful, the Compassionate'—

وهو يقول والله لو لا الله ما اعتدبنا ولا صمنا ولا صلينا فانزل سكينه علينا وثبت الاقدام ان لافينا والمشرئين قد بغوا علينا اذا اراد فتنة ابينا بسم الله الرحمن الرحيم —

There remain a few traditions to be cited from Muslim:

"Chapter of the Writing of the Decrees before the Creation (باب كتب) (المقادير قبل الخلق).

* Kur., vii[xxxvii]. 41, and xxxix[xxxix]. 58.

"I am told as a tradition by 'Abu-t-Tāhir 'Aḥmad Bin 'Amrū Bin 'Abdallāh Bin 'Amrū Bin Sarh, that 'Ibn Wahb informs us, saying: I am informed by 'Abū Hānī' 'al-Khaulānī, on the authority of 'Abū 'Abd-'ar-Rahmān 'al-Ḥubulī, on the authority of 'Abdallāh Bin 'Amrū Bin 'al-'Ās—may God be gracious to them both! saying: I heard the Messenger of God . . . say: 'God wrote the decrees respecting created things fifty thousand years before he created the heavens and the earth;' and, adds the reporter, the throne of God is upon the waters"*—

يقول كذب الله مقادير الخلائف قبل أن يخلق السموات والأرض خمسين
الف سنة قال وعرشه على الماء —

"Chapter of the saying 'Every thing is by predestination, even to infirmity and acuteness of mind.'

"I am told as a tradition by 'Abd 'al 'A'la Bin Hammād, saying: I read to Mālik Bin 'Anas for his correction, as follows; and we are told as a tradition by Kūtaibah Bin Sa'id, on the authority of Mālik, in that which was read to him for his correction, on the authority of Ziyād Bin Sa'd, on the authority of 'Amrū Bin Muslim, on the authority of Tā'us, that he said: I once caught up with certain men among the Companions of the Messenger of God . . . who were saying: 'Every thing is by predestination;' and I heard, adds the reporter, 'Abdallāh Bin 'Uṭṭar say: The Messenger of God . . . said: 'Every thing is by predestination; even to infirmity and acuteness of mind (or, acuteness of mind and infirmity)'"—

أدركت ناسا من اصحاب رسول الله يقولون كل شيء بقدر قال وسمعت عبد
الله بن عمر يقول قال رسول الله . . . كل شيء بقدر حتى العجز والكيس أو
الكيس والعجز —

"Chapter of the divine declaration 'Verily, we have created all things according to a fixed decree.'†

"We are told as a tradition by 'Abū Bakr Bin 'Abī Shaibah, and 'Abū Kuraib, saying: We are informed by Waki', on the authority of Sufyān, on the authority of Ziyād Bin 'Ismā'il, on the authority of Muhammad Bin 'Abbād Bin Ja'far 'al-Makhzūmī, on the authority of 'Abū Hurairah—to whom may God be gracious! saying: There came some idolaters of the tribe of Kuraish to dispute with the Messenger of God . . . respecting predestination; and then were revealed the verses 'On the day when they shall be trailed along in Hell, on their faces, while these words are spoken: Taste ye contact with the infernal fire. Verily, أنا كل شيء خلقناه) according to a fixed decree (بقدر).'"

"Chapter of the Mention of one who Died in Boyhood, and of the

* comp. Ps. xxix. 10, The Lord sitteth upon the flood; yea, the Lord sitteth king forever.
† Kur., liv[xlix]. 49.

Creation of Persons for Paradise, and for Hell, while yet in the Loins of their Fathers (وخلق اهل الجنة واهل النار وهم في اصلااب ابايهم).

"We are told as a tradition by Zuhair Bin Harb, that Jarir informs us, on the authority of 'al-'Alâ' Bin 'al-Musaiyab, on the authority of Fudhail Bin 'Amrû, on the authority of 'Â'ishah the daughter of Talhah, on the authority of 'Â'ishah the Mother of the Faithful—to whom may God be gracious! saying: A certain boy was taken away by death, respecting whom I said: Happy is he! a sparrow among the sparrows of Paradise has he become; whereupon the Messenger of God said: 'And dost thou not know that God made both Paradise and Hell, and accordingly creates some persons for the one and some for the other?'"—

قلت توفى صبى فقلت طوى له عصفور من عصافير الجنة فقال رسول الله ...
اولا تدربن ان الله خلق الجنة وخلق النار فخلق لهذه اهلا ولهذه اهلا—

"We are told as a tradition by 'Abû Bakr Bin 'Abî Shaibah, that Waki' informs us, on the authority of Talhah Bin Yahya, on the authority of his aunt 'Â'ishah the daughter of Talhah, on the authority of 'Â'ishah the Mother of the Faithful—to whom may God be gracious! saying: The Messenger of God ... was called to the funeral of a boy who belonged among the Defenders of the Prophet; upon which I said: O Messenger of God, happy is this boy! a sparrow among the sparrows of Paradise is he—no evil did he, and no evil will touch him; then said the Prophet: 'Or else the reverse of that; O 'Â'ishah, verily God creates some persons for Paradise, whom he creates therefor while yet in the loins of their fathers; and he creates some for Hell, whom he creates therefor while yet in the loins of their fathers'"—

قال النبي صلى الله عليه وسلم الى جنازة صبى من الانصار فقلت يا رسول الله طوى لي هذا عصفور من عصافير الجنة لم يعمل السوء ولم يدركه قال او غير ذلك يا عائشة ان الله خلق للجنة اهلا خلفهم لها وهم في اصلااب ابايهم وخلق للنار اهلا خلفهم لها وهم في اصلااب ابايهم —

"Chapter on the Fixing of Terms of Life and Portioning of Allotments, beyond the power to anticipate or defer (باب في ضرب الاجال)

(وقسم الارزاق لا يجعل سى ولا يؤخر).

"We are told as a tradition by 'Abû Bakr Bin 'Abî Shaibah, and 'Abû Kurail, saying, to use the words of 'Abû Bakr: We are informed by Waki', on the authority of Mis'ar, on the authority of 'Alkamah Bin Marthad, on the authority of 'al-Mughirah Bin 'Abdallâh 'al-Yashkurî, on the authority of 'al-Ma'rûr Bin Suwaid, on the authority of 'Abdallâh, saying: 'Umm Habibah the wife of the Prophet ... —to whom may God be gracious! said: O God, spare to me my husband, the Messenger of God, and my father 'Abû Sufyân, and my brother Mu'awiyah! and thereupon, continues the reporter, said the Prophet ... : 'Thou hast asked of God respecting terms of life already fixed, days numbered, and allot-

ments portioned out—of which nought is to be anticipated, before its time, nor deferred thereafter; hadst thou asked of God to save thee from the punishment of Hell (or, from punishment in the grave), it would have been better (or, more meritorious). The same reporter says: Mention was also made, in the presence of the Prophet, of the male apes (says Mis'ar: Whil I was the Prophet's guest [mention was made etc.]), and of the swine, representing men transformed;* then said the Prophet: 'Verily, God doth not give progeny and offspring to men transformed into lower animals† —the male apes and swine existed already, before the transformation spoken of'—

فقال النبي... قد سألت الله لاجال مضروبة وآيام معدودة وارزاق مقسومة
 لن يجعل شيئا قبل حله او يؤخر شيئا عن حله ولو كنت سألت الله ان
 يعيدك من عذاب النار او عذاب في القبر كان خيرا او افضل قال وذكر
 عنده القردة قال مسعر وأواه قال واختار به من مسنخ فعال ان الله لم يجعل
 لمسخ نسلا ولا عفيا وقد كانت القردة واختار به قبل ذلك —

It seemed proper, in citing these traditions, to give what may be called their genealogy, in the very terms of the collections from which we derive them, not merely for the sake of making more familiar the external forms under which these traditional memorials of Muhammad have been handed down, but also because their genealogical descent constitutes the main ground of their being esteemed authoritative by the Muslims themselves.‡ Yet it is not proposed to enter into a critical examination of the external history of these traditions, in order to passing judgment upon their claims to be regarded as authentic; but, taking it for granted, in reliance upon the decision of two traditionists of the highest authority, that their genealogy is unexceptionable, we may be satisfied to receive them with full confidence, as expressing opinions of Muhammad, if we find their contents consistent with the testimony of the Kurân as already presented; and perhaps the question of their authenticity may be allowed to rest on such internal evidence the more confidently, for the very reason that the contents of a tradition, being regarded by the Muslim doctors themselves as of only secondary importance in respect to its acceptance, are the less likely to have been tampered with by the generations which have transmitted it, while, at the same time, it is not to

* s. Kur., v[cxiv]. 65.

† i. e., no new species of beings is created by such transformation.

‡ s. this Journal, vii. 88.

be supposed that they would neglect the kernel in caring for the shell.

What then do the foregoing traditions teach on the subject of predestination? They declare that in the remote ages of eternity—"fifty thousand years" says one "before he created the heavens and the earth" (p. 145)—God passed certain unchangeable decrees in respect to all created things, including, for man, not only allotments of physical good and evil, and intellectual abilities, but determinations of moral conduct, and decisions as to destiny in the future world. Even wicked human conduct is represented as decreed by God: "God fore-ordains for the son of Adam his measure of lewdness—to that he attains without fail" (s. pp. 137–8); yet not so as to involve the denial of freedom to do right, for, in the very traditions here alluded to, it is implied that the will has control over those indulgences of the emotional nature which constitute sin.

As to the origin of human sinfulness, it is taught that all men are born "religiously constituted," or "religious," or "of this religion," i. e., in a condition of ability to conform to the religion which Muhammad claimed to be the true (p. 131); and this point is significantly illustrated by the saying: "like as ye take up the beast at its birth—do ye find upon it any mutilation, until ye yourselves mutilate it?" (p. 130, and comp. p. 131). Hereditary depravity, then, is denied. All departures from truth and rectitude are referred to parental instruction: "it is his parents who make him, afterwards, a Jew, or a Christian, or a Magian" (p. 132); and, also, to fierce besettings of Satan: "Every man whom his mother brings forth is buffeted on both sides by Satan" (ibid.).—Jesus and the Virgin Mary alone being exempted. Yet something of infirmity is recognized as pertaining to human nature, for men are said to stand in need of divine guidance, in order to right conduct (p. 144); and the Prophet is reported to have declared, as "one of the treasures of Paradise:" "There is no power, nor strength, but through God" (p. 137), and again: "There is made to succeed no successor [in human descent] who has not two inclinations, one prompting him to good, and impelling him thereto, and the other prompting him to evil, and thereto impelling him; and he is secured whom God secures" (ibid.). Nor is the divine influence which man needs, in order to right doing, supposed to be limited to the arrangement of outward circumstances, for "All the hearts of the children of Adam," said the Prophet, as reported, "are held between two fingers of the Merciful, as one heart, which he governs as he will" (s. p. 143). The old question of the moral condition of infants, however, is met by an implied denial of their having any positive moral character: "God best knows what would have been their conduct" [had they lived to maturity] (pp. 130–2);

—which, according to one tradition, was said in immediate connection with the denial of hereditary depravity already referred to.

There is an implied reservation of human liberty, also, in the manner in which is set forth the preventive power of the divine decrees respecting future destiny; for, while it is said that "God made both Paradise and Hell, and accordingly creates some persons for the one and some for the other" (p. 146), and even that "he guides by a predestination to misery as well as to felicity, and like as cattle are led to their pastures" (p. 144)—(if these are words of Muhammad) it is likewise affirmed that "any one of you may even conduct himself as do those destined for Paradise, until there is only an ell between him and it; and yet the registered decree shall prevent him, *so that he shall conduct himself as do those destined for Hell, and accordingly enter therein*: and any one of you may even conduct himself as do those destined for Hell, until the distance between him and it is only an ell; and yet the registered decree shall prevent him, *so that he shall conduct himself as do those destined for Paradise, and accordingly enter therein*" (p. 123). Again, that a man is not borne along by irresistible fatality to Heaven or to Hell, but is himself the prime procurer of his own future destiny, is explicitly taught: "There is no one of you," the Prophet is reported to have said—"there is no soul born whose place, whether Paradise or Hell, has not been predetermined by God, and which has not been registered beforehand as either miserable, or blessed;" whereupon a certain man inquired: "O Messenger of God, shall we not, then, await our registered destiny, and let conduct alone?" to which the Prophet is said to have replied: "Whosoever is destined to felicity, will set himself to the conduct of the blessed; and whosoever is destined to misery, will set himself to the conduct of the miserable. *Work ye, seeing that every one is divinely furthered*: as for those destined to felicity, they are furthered to the conduct of the blessed; and as for those destined to misery, they are furthered to the conduct of the miserable" (p. 126); while, according to another tradition, it was said by the Prophet: "Every moral agent is *furthered to his own conduct*" (p. 128), or, as another has it: "Every one is divinely furthered in accordance with his character" (ibid.).

On the other hand, the doctrine that character and conduct are not matters of contingency, but are included within the scope of the decrees of God, is equally well guarded. To the inquiry: "O Messenger of God, dost thou think that what men now do, and endeavor after, is something determined for them, and which a preventing predestination previously assigned to them? or are their actions casual incidents, consequent upon what their Prophet has announced to them, and their proved obligations?" (in another tradition: "was it unchangeably writ-

ten, and predetermined, that we should be so disposed as we are, at this time, touching present conduct? or, on the other hand, is our character a casual incident?" the Prophet is reported to have replied: "Not so, but rather are the actions of men determined for them, and previously assigned to them" (s. pp. 128-9).

One tradition, indeed, reported by Bukhârî and Muslim together in several forms, respecting an imagined dispute between Adam and Moses, might seem to imply that divine predestination excludes blameworthiness: "Said Moses: O Adam, it is ~~thou~~ our father, who didst frustrate our destiny, and eject us from Paradise; to whom Adam replied: O Moses, thou art he whom God did specially favor with converse with himself, and for whom he traced lines of writing with his own hand—dost thou blame me for doing what God predestined for me forty years before he created me? Therefore Adam got the better of Moses in the dispute" (s. p. 139, and comp. pp. 140-1). But these words put into the mouth of our prime progenitor: "dost thou blame, etc." are an *argumentum ad hominem*, intended to silence one who fails to recognize the moral liberty of the race—comp. the expressions attributed to Moses: "didst frustrate our destiny," "didst spoil mankind of their rectitude" (p. 140), and "didst lay prostrate the race of man" (ibid.).

The preceding remarks cover all the important theoretical part of Muhammad's teachings, reported by tradition, with respect to predestination. But there are embodied in the traditions under review some practical principles, bearing upon the subject, which also claim our notice.

A certain passiveness in regard to outward circumstances is enjoined as follows: "no mortal, being in a city where there is pestilence, who waits in the midst of it, not leaving the city, patient and collected, knowing that no evil will befall him but that which God fore-ordained for him—shall he not have a like reward with the martyr?" (p. 144); and again, when one of the Prophet's wives had prayed to God to spare her husband and her father, Muhammad is reported to have said: "Thou hast asked of God respecting terms of life already fixed, days numbered, and allotments portioned out—of which nought is to be anticipated, before its time, nor deferred thereafter; hadst thou asked of God to save thee from the punishment of Hell (or, from punishment in the grave) it would have been better (or, more meritorious)" (pp. 146-7); also, on another occasion, in reply to a message from one of his daughters, to inform him that her son was at the point of death, the Prophet is reported to have said: "To God belongs both what he takes away and what he grants; every one has a fixed term of life; be thou, then, patient, and consider" (p. 133).

On the same ground, vowing to God is forbidden: "Vowing

to God brings the son of Adam nothing which I have not fore-ordained, but turns him over to predestination for that which I have fore-ordained for him" (i. e., he gets it not for his vowing, but because it was fore-ordained for him)—"it is from an avaricious being that one gets any thing by vows" (s. p. 136).

Again, it is set forth as becoming the believer to seek profit by the "some good in every thing," asking help of God, and trusting in him, when ill befalls, with the injunction: "say not: Had it been my doing, it would have been so and so, but say: It is God's decree, and whatever he wills he does" (p. 142).

It appears, then, from this review, that the doctrine of predestination which Muslim tradition ascribes to Muhammad, though more fully developed, indeed, than the teachings of the Kurân on the same subject, is entirely consistent with the latter; for while, on the one hand, we seem to find a system of absolute election and reprobation, there is a doctrine of human freedom unmistakably presented, on the other, compelling us to qualify the sharper assertions of divine predestination in harmony with it. We may add, in passing, that the language of tradition seems often to be a reflection, or even a repetition, of that used in the Kurân. It is also worthy of remark, with regard to the style of these traditions, that the concrete form of their doctrinal statements is fitted to encourage confidence in their being genuine, especially when one contrasts this mode of presentation with the abstract tenor of the discussions on the subject of predestination, and kindred topics, which arose in the schools of the Muslims, after Muhammad's generation had passed away.

3. In pursuance of the plan proposed, I shall now simply excerpt what is to be found relating to predestination in Shahrastâni's exposition of Muslim theologico-philosophical speculations, up to his time in the twelfth century. No such summary has been drawn up hitherto; and, indeed, Shahrastâni's *Book of Religious and Philosophical Sects*, while perhaps the most important original authority which we have, covering the whole field of Muslim philosophy, could be consulted, till of late, by only a few of those whom its statements especially concerned; and is now known, beyond the circle of professed orientalists, only by the German translation of Haarbrücker, which can be scarcely said to suffice for the reader to whom the original Arabic is not also intelligible. Some brief explanations will be thrown in, here and there, to make our author's meaning more clear, and some chronological data will be added,* but I shall not attempt,

* Our author's arrangement, which seems to be in chronological sequence, may serve to determine, approximately, the periods of some of the theologians named.

at present, independently of this author, either to point out the possible historical connections, or to unfold the metaphysical origin, of any of the opinions stated. However inviting a field of research it may be, to ascertain the genesis of these speculations, I do not feel myself prepared to enter upon it in the way of original investigation; and even the latest writers on the Scholastic philosophy whom I have consulted, Hauréau, Rousselot, and Ritter, offer but little assistance in such an inquiry. All these writers confine their remarks upon the philosophy of the Arabs, for the most part, to the various modifications of Aristotelianism which grew up among them, to the neglect of the doctrines of the Kurân; and it would, certainly, have been less to their purpose to inquire into those speculations by which disciples of Muḥammad who professed to keep within the limits of received doctrine, sought to shape their religious belief to the requirements of widening philosophical culture. The same point of view is that chiefly taken by Munk and Renan, also, in their late valuable publications relative to Arab philosophy. The more simple statements of the Kurân, and those of the great collections of tradition, might have, also, led us to some interesting comparisons; for there is a striking similarity between the Kurânic doctrine of predestination and the Biblical, inasmuch as both enunciate the opposite truths involved, with equal boldness, and a seeming unconcern about their reconciliation; nor can it be doubted that the definitions thrown around the subject by Muslim tradition, imperfect as they are, savor much of what has been called the Greek anthropology.* But I could not well pursue even these more obvious lines of comparison.

Muslim theologians, as Shahrastâni informs us,† have differed among themselves on the following points: 1. the divine unity, 2. divine justice, 3. the promises and threatenings of God, 4. revelation, 5. human reason.

The orthodox doctrine of divine justice is defined to be "that the Supreme God is just in his doings in the sense that he exercises sovereign discretion in his kingdom and dominion, doing what he wills, and ordaining as he pleases (أنه متصرف في ملكه)

(وَمُلْكُهُ يَفْعَلُ مَا يَشَاءُ وَجَعَلَ مَا يَرِيدُ): for justice," it is said, "consists in putting things in their right places, which is sovereignty of control in accordance with the promptings of choice and the requisitions of knowledge, while injustice is the opposite; so that no iniquity in ordaining, or injustice in disposing, is to be imagined as pertaining to God"—in short, that the character of God

* a. Shedd's *History of Christ. Doctr.*, New York, 1868, ii. 26-42.

† pp. 28-9 of Cureton's edition.

as a just being, in the view of his creatures, depends not upon his acts, but is to be assumed, whatever his acts may be or seem to be. The Separatists, on the other hand, defined justice to be "conformity to the dictates of reason with regard to what is wise (ما يتنصيه العقل من الحكمة), that is, the governing of action by the standard of rectitude and utility." Such is the fundamental difference of system which we shall find carried out in the speculations to be brought forward, touching the relations of God to the world.

Accordingly, as to the third point, those reputed orthodox denied that there is any ground in the nature of things for the divine threatenings and promises, or for the divine commands and prohibitions; but resolved both into "an eternal fiat of God (كلامه الأزلي), so that every one who is saved, and partakes, as he must, of reward, is saved by virtue of divine promise (فبوعده); and every one who is lost, and partakes, as he must, of penalty, is lost by virtue of divine threatening (فبوعيبه); and accordingly nothing befalls any one by a necessity arising from the requirements of reason (فلا يجب عليه شيء من قضية العقل)." But the Separatists affirmed that there is no such eternal fiat, and that all the divine commands and prohibitions, promises and threatenings, are contingent (بكلام محدد), "so that whoever is saved merits reward for his conduct, and whoever is lost merits penalty for the same; and that reason, having respect to what is wise, requires these allotments (العقل من حيث الحكمة يعتنى ذلك)."

Tradition shows, as we have already learned, that in the minds of the followers of Muhammad, in his own day, there was a conflict between the sense of human responsibility and belief in divine sovereignty; and we have also seen that the teachings of the Kurân left open the way to just that opposition of views which is brought out by Shahrastâni in the statements here referred to. But we learn from our author, more particularly,* that "in the latter days of the Companions of the Prophet arose the new doctrine of Ma'bad 'aj-Juhanî, Ghailân 'ad-Dimashkî and Yûnus 'al-'Aswârî, consisting in the maintenance of human ability, and a denial of all relation of moral good and evil to divine predestination (في القول بالقدر وانكار إضافة)

والخير والنشر إلى القدر"; and that their views were further developed by Wâsil Bin 'Atâ' 'al-Ghazzâl and his pupil 'Amrû Bin 'Uбайд;† but that Wâsil and his followers were the first to be

* pp. 17-18 as above.

† Who both lived in the first half of the eighth century: s. p. 155, and Ibn Khalik, ed. De Slane, p. 536.

designated by the name of Mu'tazilah, or Separatists. At a later period, some of the masters of the Mu'tazilah gave themselves to the diligent reading of the works of the Philosophers,* when translated in the days of 'al-Ma'mûn [in the early part of the ninth century], and so incorporated their methods with their own, and formed a special branch of science under the name of 'al-Kalâm," that is, the Science of the Divine Word, or dogmatic theology.†

We have now to follow the details of our author respecting the doctrines of the Mu'tazilah, and of the several subordinate sects included under that name, so far as they bear upon the subject of predestination.

First, then, from his specification of some points on which all the Mu'tazilah concurred, we derive the following particulars.‡ It was an opinion common to them all, that "eternity is the distinguishing attribute of the Divine Being;" and they all denied the existence of eternal divine qualities, on the ground that, being eternal, they could only be conceived of as so many separate divinities. Their language on this point was that God "is knowing by virtue of his being, powerful by virtue of his being, living by virtue of his being—not by knowledge, power, and life as eternal qualities, and ideas subsistent in him (هو عالم لذاته قادر)

” (لذاته حتى لذاته لا بعلم وقدرة وحيوة في صفات قديمة ومعاني قديمة به

In like manner, "they all denied that willing, hearing, and seeing are ideas subsistent in the Divine Being, thought differing as to the modes of their existence, and their metaphysical grounds."

"They also agreed in believing that man is the creative efficient of his actions, good and bad (أن العبد قادر خالف لأفعاله) (خيرها وشرها), and gets reward and punishment in the future world, by merit, for what he does; and that no moral evil or iniquity, or action of unbelief or disobedience, can be referred to God, because, if he has caused unrighteousness to be, he is himself unrighteous (لأنه لو خلف الظلم كان ظالما).

"They all believed, also, that the All-wise does only that which is beneficial and good (إلا الإصلاح والخير), and that a regard to the interests of men (مصالح العباد), in the light of wisdom, is incumbent upon him; though they differed as to his being obligated to secure the highest good, and to bestow grace (وأما الأصلح وجوبه خلاف عندهم). (واللطف ففي وجوبه خلاف عندهم."

* i. e., the works of Greek philosophers, chiefly of the school of Aristotle; those of the Muslims who gave themselves up to the methods and views of that school were consequently called Philosophers, and we shall find the name frequently used in this sense.

† Munk, in his *Mélanges de Philos. Juive et Arabe*, p. 312.

‡ pp. 30-1 as above.

Of what our author says of the doctrines of the several sects of the Mu'tazilah, the following statements are to our purpose.*

"The *Wāsilīyah*—followers of 'Abū Hudhaifāh Wāsil Bin 'Atā' 'al-Ghazzāl, a pupil of 'al-Ḥasan of Baṣrah . . . both of whom lived in the days of 'Abd-'al-Mālik and Hishām Bin 'Abd-'al-Mālik [A.D. 684–743]. in the West, at the present time, there is a small remnant of them. . . . Their separatism turns upon four fundamental points: 1. The denial of knowledge, power, will, and life as qualities of the Creator." . . . Wāsil took up this doctrine on the ground that all men recognize "the absurdity of the existence of two [or more] eternal, infinite divinities, . . . but it was only after study of the works of the Philosophers that his followers came to entertain it. Their speculations on the subject led them, at length, to reduce all divine qualities to the fact that God is knowing and powerful (إلى كونه عالما قديرا), and afterwards to determine that knowledge and power are qualities of the nature of essence (صفات ذاتية), which are to be accounted as going to make up the eternal essence (ما اعتباران للذات القدسية)—according to the expression of 'aj-Jubbā'ī,† or states (حالات)—according to that of 'Abū Hāshim;‡ while 'Abu-l-Ḥusam of Baṣrah§ was inclined to reduce the two to one, namely, the quality of a knowing being (العالمية), which is precisely the teaching of the Philosophers." . . . 2. Their way of maintaining predestination. "On this point, Wāsil only followed in the steps of Ma'bad 'aj-Juhanī and Ghailān 'ad-Dimashkī, though he made more of it than of his doctrine with respect to the divine qualities. Accordingly, he said that the Creator is wise and just, and that it is inadmissible to refer evil and iniquity to him; that it cannot be that he prefers on the part of men the opposite of what he commands, and that, having ordained what their conduct should be, he afterwards recompenses them for the same: so that man is the doer both of good and evil, and therefore faith and unbelief, obedience and disobedience, are his own acts; and he is recompensed for what he himself does; and the Lord has put all acts and their issues within the scope of man's power (أقدره على ذلك كله). . . . He also said that it were absurd for a man to be told to do any thing, if he is unable to do it (يُستحيل أن يخاضب العبد), يستحيل أن يفعل (بأنفعل وهو لا يمكنه أن يفعل), that man is conscious of efficiency in himself, and of being an agent (وهو يحس من نفسه الاقتدار والفعل), and that whoever denies this denies demonstrative truth; and he used passages of the *Qurān* [as well as arguments from rea-

* pp. 31–59 as above.

† Born in 861, died in 938: Hammer-Purgstall's *Lit.-Gesch. d. Ar.*, iv. 207.

‡ Died in 938: *Lit.-Gesch. d. Ar.*, iv. 300.

§ Lived at Baghdād, and died there in 1044: Ibn Khallik, p. 675.

son] to prove these assertions." . . . Wāṣil "referred that term of tradition 'predestination' to trial and deliverance, adversity and prosperity, sickness and health, death and life, and other doings of God, exclusive of moral good and evil, virtue and vice, regarding men as responsible for the latter (دون الخير والشر) (والحسن والفبيح الصادرين من اكساب العباد) ; and it is in the same sense that the whole community of the Mu'tazilah employ that term." . . .

"The *Hudhailīyah*—followers of 'Abu-l-Hudhail Ḥamdān Bin 'Abu-l-Hudhail 'al-'Allāf" . . . who became one of the Mu'tazilah under the teaching of 'Uthmān Bin Khālid 'at-Tawīl, who was himself taught by Wāṣil . . . 'Abu-l-Hudhail "held to ten fundamental points which were his own: 1. That the Creator is a knowing being by virtue of knowledge, but that his knowledge is his essence; powerful by virtue of power, but that his power is his essence; living by virtue of life, but that his life is his essence"—a view adopted from the Philosophers, who held that the divine essence is strictly one, and that its qualities are not separate therefrom, and subsistent in it, but constitute that essence itself.* . . . "But if 'Abu-l-Hudhail affirmed these qualities to be modes (وجوها) of the divine essence, he made them to be just the same as the hypostases (أفانيم) of the Christians, or the states of 'Abū-Ḥāshim.† 2. That there are volitions of the Creator without any subject in which they inhere (أرادات لا محل لها بكون) (البارى تعالى مريدا بها) . . . 3. That the fiat of God "is partly without any subject in which it inheres, to wit, his command to be, and partly inherent in a subject, as, for instance, an injunction or a prohibition, an announcement or an interrogation;" and he distinguished between "the creative mandate (أمر النكوبى) and the order imposing obligation (أمر التكليف)." 4. That in his present state of being man possesses a determining power of will, but that "in the states of final retribution all human movements are ruled by necessity, men having no power over them, and all of them being generated by the Creator (كلها ضرورية لا) (قدرة للعباد عليها وكلها مخلوقة للبارى) : because, if within the power of men, they would be laid upon them as duties to be performed [and so men would be again under probation]." . . . 6. That "free will (الاستطاعة) is an accident (عرض), additional to perfection of development (السلامة) and soundness (الصحة)." He distinguished between actions of the heart and actions of the corporeal members, affirming that

* comp. the Scholastic definition of the Deity as "actus purus."—N. P.

† s. pp. 155, 169.

the former could not be fully effected without ability (القدرة) and free will, but that the latter might be: he also held free will to be a sort of inchoate action. He taught, moreover, that "whatever is brought about through the medium of action on the part of man (ما تولد من فعل العبد) is his doing, except [the perceptions of] color, taste, smell, and the like, which are inexplicable," and excepting also all comprehension and knowledge obtained in the way of instruction, which he regarded not as the learner's work, but as called into being by God (الله تعالى) (يبذلعهما فيه وليس من أفعال العباد). ... 8. That a certain time is definitely fixed for the termination of a man's life, "unless he dies by violence (أن لم يقتل)," and that not all things which God has made are things bestowed by him—such as are in fact useful to men [whether expressly allowed to them or not] being, indeed, properly called bounties created by God for them (ما خلق الله) (تعالى من الأمور المنتفع بها يجوز أن يقال خلقها رزقا للعباد), while, of things in respect to the use of which God has made known his will, only those allowed to men, not those which are forbidden, are to be regarded as divine gifts. 9. As 'al-Ka'bî* reports, that "God's willing is something distinct from that which is willed: for his willing of that which he creates is his creation thereof, but his creation of a thing is not the thing itself—nay, according to him, creation is a fiat without any subject in which it inheres [being divine essence itself]† (إرادة الله غير المراد فأرادته لما خلق في) (خلق له وخلق له الشيء عند غير الشيء بل الخلق عنده قول لا في محل).

'Abu-l-Hudhail died A.H. 235 [A.D. 849-50], in the beginning of 'al-Mutawakkil's khalîfate."‡ ...

"The *Nazzâmîyah*—followers of 'Ibrahîm Bin Saiyâr 'an-Nazzâm,§ a diligent student of the books of the Philosophers, some of whose dogmas he incorporated into the system of the *Mu'tazilah*." This theologian "separated himself from others of his denomination in respect to several particulars: 1. In maintaining the doctrine that men have the determining power over

moral good and evil (القول بالقدر خير وشره منّا), he went so far as to say that God has no ability in respect to moral evils and sins (أن الله تعالى لا يوصف بالقدرة على الشرور والمعاصي وليست هي مقدورة) (للباري); wherein he differed from his fellow-theologians, inasmuch as they held that God is capable of misdeeds, though not

* Died in 929. Ibn Khallik, p. 354. This date will serve to determine more nearly the periods of certain theologians yet to be named, of whom 'al-Ka'bî speaks.

† s. p. 156.

‡ s. also 'Ibn Khallik, p. 678.

§ Of Basrah, a nephew of 'Abu-l-Hudhail; he died in 845-6: s. De Slane's transl. of 'Ibn Khallik, i. 186, note (4).

an actual doer thereof." He maintained that God must needs be wholly clear of that which is vicious, and that, "therefore, the Doer of Righteousness is possessed of no ability in respect to unrighteousness (لا يكون مانعا ففاعل العدل لا يوصف بالقدرية) (على الظلم الاختيار)." To this view of the power of choice (الاختيار) in the Divine Being he added that, as regards things of the present life, God "has power only to do that which he knows will benefit his creatures (انما يقدر على فعل ما يعلم ان فيه صلاحا لعباده)" and that he has no power to increase or diminish the penalties of the future world, or to diminish its rewards. It was urged against him as an unavoidable inference from these positions, that God must be regarded as subject to a natural necessity (مطبوعا), and controlled by a superior force (مجبورا), in what he does, "for that he only who can choose between doing and not doing is truly possessed of power (فان القادر على الحقيقة من يتخير بين الفعل والتترك)" —which he retorted by saying that those who affirm God to be capable of misdeeds, and yet that his doing evil would be an absurdity, equally restrict his freedom. He borrowed these views from the ancient Philosophers, who maintained that God has no reserved power, but that what he actually originates and causes to be is the measure of his ability (ثنا ابدعه وارجده هو المعدادور). . . .

2. He denied that God exercises volition in any proper sense: "for, if he be said to govern his own actions by volition, the meaning is that he causes them to be, and originates them, in accordance with what he knows (فاذا وصف بها شرعا في افعاله فالمراد)

(بذلك) انه خالقها ومنشئها على حسب ما علم to will human actions, the meaning is that he commands those actions (واذا وصف بكونه مريدا لافعال العباد فالمعنى به انه امر بها). . . .

4. Respecting the human constitution, he taught, with the Philosophers, that "the essential constituents of man are soul and mind, together with body as the instrument and mould of sensibility and intellect (في الحقيقة هو النفس والروح والبدن آلتها وقالبها) . . . but "that mind is a subtle matter (جسم لطيف), involved in the body, which enters with its particles into that mould, as watery quality enters into the rose, oily quality into sesamum, and fatty quality into milk." The distinguishing prerogatives of mind, in his view, are force (قوة), * free will (استطاعة), life (حيوة), and choice (مشيئة); mind "has free will in and of itself, and all action presupposes it (وهي مستطبعة بنفسها والاستطاعة قبل الفعل). 5. He affirmed, as 'al-Ka'bî states, that whatever action transcends any

* i. e., undoubtedly, the power to originate motion, or effects, in matter.—N. P.

particular subject of ability must be God's doing by means of a necessity of nature (لن كل ما جاوز محل القدرة من الفعل فهو من فعل) (الله تعالى بإيجاب الخلقه) e. g., the movement of a stone, which is thrown upwards, and returns to its place when the impelling power is spent. . . . 8. "I" was a part of his teaching, that God created all existing things, as now constituted, at one stroke—minerals, plants, animals, man (خلق الموجودات دفعة واحدة على) (ما هي عليها الآن معادن ونباتا وحيوانا وانسانا)—that is to say, for example, that, so far as creative agency is concerned, Adam did not exist before his posterity, . . . so that the seeming priority and posteriority of existence is only in manifestation, not actual. Here too he borrowed from the Philosophers. . . . 12. He held that, without a revelation, man is capable, by reflection, of recognizing the Creator, and of distinguishing between virtue and vice, . . . "and he said that, in order to a genuine power of choice, there must needs be two suggestions, one bidding to go forward, and the other to hold back (لا بد من خاطرين احدهما يأمر بالاقدام) (والاخر بالكف ليصيح الاختيار) . . . He said also, with respect to the future life, that the mercy of God to infants is like the mercy of God to brute beasts.

"Al-'Aswâfî agreed with him in all his views, but went beyond him so far as to say that God has no ability in respect to what he knows he will not do, nor as to what he has announced that he will not do (ان الله تعالى لا يوصف بالقدرة على ما علم انه لا يفعل) ; while man has such ability, because human ability is adapted to contraries, and every one understands that of two contraries one or the other is known to be sure not to be (مع ان الانسان قادر على ذلك لان قدرة العبد صالحة) (للضدين ومن المعلوم ان احد الضدين واقع في المعلوم انه سيوجد دون للضدين) . . . 'Abû Ja'far 'al-'Iskâfî* and his followers of the Mu'tazilah also agreed with him, and said, in addition, that God has no ability in respect to the unrighteousness of any rational beings, but only in respect to that [which is only apparent] of infants and the insane (ان الله تعالى لا يقدر على ظلم العقلاء وانما) (بوصف بالقدرة على ظلم الاطفال والمجانين) . . .

"The *Hâ'itîyah* and the *Ḥadathîyah*—followers of 'Aḥmad Bin Ḥâ'it and of Faḍl Bin 'al-Ḥadathî, who were both of the school of 'an-Nazzâm, and diligent students of the books of the Philosophers, and coupled with the teaching of their master three new doctrines: . . . 2. The doctrine of metempsychosis: they be-

* Of 'Isfârâ'in, a pupil of 'Abû 'Ishâk of that city; he died in 1062: s. De Slane's transl. of 'Ibn Khallik, ii. 122, note (2).

lieved that God produced his creatures sound, entire, rational, perfect, in another world than this in which they now are (أبدع)

(خلقه أصحاء سالمين عقلاء بالغين في دار سوى هذه الدار التي هم فيها اليوم), and created within them a recognition and knowledge of himself, and lavished his mercy upon them, . . . so that from the first he made them to owe gratitude to him; and that some obeyed all his commands, while others were disobedient to all, and others in part obedient and in part disobedient; and that they who obeyed him in every thing were permanently established by him in the world of bliss wherein he first placed them, while they who disobeyed him in every thing were ejected thence into the world of punishment, that is, Hell; and that they who were partly obedient and partly disobedient were driven out by him into this world, in which he clothes them with these gross bodies, and tries them by misfortune, distress, hardship and indulgence, pains and pleasures, in various animal forms, human and other, according to the measure of their criminality; . . . and that the animal ceases not to exist in this world, time after time, and in form after form, so long as its sins, together with its virtues, cleave to it."* . . .

"The *Bishriyah*—followers of Bishr Bin 'al-Mu'tami, who was one of the most eminent of the doctors of the Mu'tazilah, and the originator of the doctrine of production by generative action (التولد lit. generation), which he carried to the furthest extreme. He differed from others of the same general way of thinking in six particulars: 1. That he thought it might be that [perceptions of] color, taste, and smell, and all perceptions obtained by hearing and sight, are the result of generative action upon man from without, involving the existence of causes of

those perceptions (انه زعم ان اللون والطعم والرائحة والادراكات كلها من السمع والبرؤية يجوز ان تحصل متولدة من فعل الغير في الغير اذا كانت بالقدرة) (أسبابها من فعله)—a view which he adopted from the naturalistic school of Philosophers, only that they make no distinction between what is produced by generative action (المتولد) and what is effected by an exercise of power [on the part of man] (المباشر) [regarding all effects as resulting from natural laws], and often expressly define power otherwise than our theologians, the capability of being acted upon by a [blindly] active force (قوة الفعل وقوة الانفعال) being something different from power in

* The theodicy of these two teachers, then, regarded moral evil in the world as the result of freedom in a prior state of existence, and natural evil as disciplinary, designed for the removal of impurities caused by the abuse of that freedom.

† s. p. 157.

the sense of our theology. 2. His saying that free will consists in corporeal wholeness, and entire soundness of limbs (الاستطاعة هي)

(سلامة البنية وصحة الجوارح وتخليها من الافات); and his affirming, not that man acts freely in the first stage of action [namely, that of volition], but not in the second [that of the execution of volition], but that man is an agent, and that there is [properly speaking] no action on his part except in the executive stage (الانسان يفعل والفعل لا يكون الا في الثانية). 3. His doctrine that God might punish an infant (ان الله تعالى قادر على تعذيب), though, if he were to do so, he would be treating him unjustly (ولو فعل كان ظالما اياه); which, however, he would not declare in so many words, choosing rather to say that, were God so to do, the infant would be proved to be a rational adult, guilty of some crime for which he deserves punishment—which is a contradiction in terms." 4. That, as is stated by 'al-Ka'bf, "he spoke of God's exercise of volition as an act of his in a two-fold relation (ارادة الله تعالى فعل من افعاله وهي على وجهين), being both a qualification of essence (صفة ذات) and a qualification of action (صفة فعل): a qualification of essence—for God is perpetually willing all his own actions and all the obediences of his creatures, since he is all-wise, and the All-wise cannot know what is beneficial and good without willing it; and a qualification of action—for he thereby wills his own doing, at the instant of its actualization (في حال احدثه), so that his exercise of volition is [virtually] a creation thereof, though prior to [actual] creation, because that whereby a thing is cannot be contemporaneous therewith; and thereby, also, wills the doings of his creatures, which amounts to commanding those doings. 5. His saying that there is a [measure of] divine grace of which the bestowment would secure such conversion of all mankind to the faith that they would merit the same reward as if they had believed without that grace, and even more

ان عند الله تعالى لطفًا لو اتي به لآمن جميع من في الارض ايمانًا (يستحقون عليه الثواب استحقاقهم لو آمنوا من غير وجوده واثر منه); but that God is not obligated to deal thus with his creatures; and that a regard to the highest good is not the rule for him (ولا يجب عليه رعاية الاصلح), because, as there is no limit to his command of what is beneficial, there is to him no such thing as an absolutely highest good (لانه لا غاية لما يقدر عليه من الصلاح فما); but that God is only bound to endow his creatures with ability and free will, and to remove incidental hinderances by means of invitations and messages, . . . and that, in order to the exercise of the power of choice, on the part of

man, in his action, the two-fold suggestion* is not essential, which, indeed, comes not from God, but from Satan." ...

"The *Mu'ammariyah*—followers of Mu'ammār Bin 'Abbād 'as-Sulamī, who went beyond all other advocates of human ability (وهو اعظم القدرية) in subtleties against the reality of the divine attributes, and of predestination of moral good and evil by God. ... Among the particulars in which he differed from others of his denomination are the following: 1. That God creates nothing except bodies (الاجسام), so that accidents (الاعراض) are developments from bodies (اختراعات الاجسام), either by a natural necessity (طبعاً)—as in the case of fire, which originates burning, and the sun, which originates warmth, and the moon, which originates color—or conditioned by the power of choice (اختياراً), as in the case of an animal, which originates motion and rest, copulation and separation; and both the coming into existence of body and its ceasing to be (حدوث الجسم وفناءه) are, in his view, also accidents—strangely, indeed, for how could he say that either the one or the other is through the action of body itself? moreover, on the principle that the Creator originates no accident, he originates neither the existence of body nor its destruction, because its existence [as well as destruction] is an accident; from which it follows, by unavoidable inference, that no activity at all pertains to God. ... 2. That accidents are permanent in the several species of things to which they belong (لا تنتهي في كل نوع), and that every accident subsists in a subject, though its subsistence therein is only by virtue of some idea [of the human mind] which requires it (كل عرض

قائم بمحل فانما يقوم به لمعنى اوجب القيام)—which results in the fallacy of the circle." On the ground of this view of accidents as only ideally subsistent Mu'ammār and his followers were called Idealists (اصحاب المعاني). ... 3. "As 'al-Ḳa'bī reports, that God's willing of any thing is neither God himself [that is, divine essence], nor the creation of that thing by him, nor an ordering of it, nor an announcement thereof, nor a judgment respecting it—intimating some unknown and incomprehensible thing. He likewise held that to man pertains no activity except that of will (ليس للانسان فعل سوى الارادة), either directly causative (مباشرة) or acting through generative action from without (توليدا); and that all actions which are made obligatory upon him ... resolve themselves into the exercise of volition on his part (كلها مستندة الى ارادته) ...—which

finds its explanation in his doctrine with respect to what truly constitutes man, namely, that he is "an idea,* or a substance, without body (معنى أو جوهر غير الجسد), which knows, has ability, chooses, and discerns, while it neither moves nor rests, nor takes color, nor occupies place, nor is either seen or felt or touched, nor takes one position instead of another, nor is embraced by space or limited by time, but, on the other hand, is itself the regent of the body (مدبر للجسد); and that his association with the corporeal is an association of regulation and disposal"—a view which he borrowed from the Philosophers . . . 4. He is reported to have denied the eternity of God . . . and to have said "that God knows [only] of priority [of existence] in time (يشعر بالنعادم الزماني)." . . . and to have insisted upon distinguishing between creation and the thing created, and between production and the thing produced [making God not answerable for the latter]; "and Ja'far Bin Harb reports that he affirmed it to be absurd that God should know himself, because that would lead to the confounding of subject and object of knowledge; and absurd that he should know things which are apart from himself, just as his having the sovereign disposal of all existing things is held to be absurd, inasmuch as he himself is an existence. But perhaps this statement is erroneous, . . . so that what 'Ibn 'Abbād maintained was that it should not be said that God knows himself, because that would lead to a distinction between [God as] the knowing and [God as] the known; nor that he knows things which are apart from himself, because that would imply a knowledge dependent upon what is external to himself, of derived origin." . . .

"The *Muzdārīyah*—followers of 'Isa Bin Sabīh, called 'Abū Mūsā, and distinguished by the epithet of 'al-Muzdār, a disciple of Bishr Bin 'al-Mu'tamir . . . who lived a life of devout seclusion, and bore the name of Monk of the Mu'tazilah. He differed from others of his party in several particulars:" 1. He said "with respect to power (القدر), that God might (يقدر) lie and be unjust, and that, were he so to do, he would be a lying, unrighteous deity—[in other words, that the same criterion of right and wrong which applies to man, both as regards power to do either, and the putting forth of that power in act, is applicable to God]. . . . 2. As to generative action upon man from without (التولد), he professed the same doctrine as his master, adding thereto that, by virtue of such generation, one and the same action may proceed from two agents (جوز وقوع فعل واحد من فاعلين على سبيل التولد) . . . but "he regarded as infidels those who say that the conduct of men is created by God (أن أعمال العباد مخلوقة لله)." . . .

* Probably, in the sense of the Platonic emanation-system.

"The *Thumâmîyah*—followers of Thumâmah Bin 'Ashras 'an-Numairî, a man of slender faith in religion, and dissolute character. . . . Among his peculiarities of doctrine were the following: 1. That actions produced by generation from without (الافعال المتولدة) are actions of no agent: since one may not refer them to that generative agency by which their causes exist,* thereby involving, by necessary inference, that such action may be owing to the operation of a cause without life, as when a cause acts and dies, and the product of its generative action comes into existence subsequently (حتى يلزم ان بضعيف الفعل) (الى ميت مثل ما اذا فعل السبب ومات ووجد المتولد بعده); and since they are not referable to God, because such reference might lead to imputing to him what is vicious, which is absurd. . . . 2. That infidels, idolaters, Magians, Jews, Christians, Dualists, and Deniers of Immortality, will be turned to dust at the resurrection; and in like manner, beasts, birds, and the infants of believers. 3. That free will (الاستطاعة) consists in completeness and entire soundness of the members of the body, and is a pre-requisite to all action (فيل الفعل). . . . 6. That man is an agent only in volition (لا فعل للانسان الا الارادة), and that whatever exceeds the province of the will [in human action] originates without an originator (وما عداها فهو حدث لا محدث له)." Furthermore, 'Ibn 'ar-Rawandî states as the opinion of Thumâmah, that "the world is God's work by virtue of his nature (العالم فعل الله تعالى بضمه), meaning thereby, perhaps, what the Philosophers mean when they speak of a necessity of being (الاجباب بالذات), in contradistinction to production in accordance with volition," which involves the idea of the eternity of the world, "since a necessary result is implied by a necessitating cause (ان الموجد لا ينفك عن الموجد). Thumâmah lived in the

days of 'al-Ma'mûn, and was a man of position in his court."

"The *Hishâmîyah*—followers of Hishâm Bin 'Amrû 'al-Fûfî, who went to a further extreme than others of the Mu'tazilah in the assertion of human ability, refusing to admit of any sort of reference of certain actions to the Creator (وكان يمنع من اطلاق) (اضافت افعال الى البارى), even though Revelation attributes them to him;" and saying "that God does not unite the hearts of believers, but that believers come together by their own power of choice (باختيارهم), notwithstanding the Revealed Book declares: 'thou wouldst not have joined their hearts in friendship; but God hath united them;† and that God makes not believers to love

* s. p. 160.

† Kur., viii. 64—s. p. 118.

the faith, nor renders it precious to their hearts, although the Supreme has said: '[But God] has made you to love the faith, and rendered it precious to your hearts;'"* and yet more vehemently and contumaciously denying that God stamps any one with a particular character, or seals the heart, or shuts it up, and the like, notwithstanding the Revealed Book declares each and all of these things [as, for example]: 'God hath sealed up their hearts and their ears,'† and 'nay, but God has stamped upon them their own unbelief;‡ and 'We have put a barrier before them, and a barrier behind them.'§ ... Another of the doctrines which he originated was "the denial that accidents prove God to be a creator, or are valid as proofs [of any thing], while he asserted, on the other hand, that bodies do prove a divine creator (قوله ان الاعراض لا تدل على كونه خالفا ولا)

... He held also that, though a man should have obeyed God all his life long, a foreknowledge on the part of God that he would have annulled his good deeds by some great crime [if he had lived longer] would be sufficient ground for his forfeiting reward; and the same, on the reverse supposition. A follower of his, the Mu'tazilite 'Abbâd, "abjured altogether the doctrine that God is the creator of an infidel, inasmuch as the infidel is made up of infidelity and man, and God does not create infidelity." ... 'Al-Fûî held, moreover, "that things, before they exist, are nonentities, and not things, though, after they have ceased to exist, they may still be called things (ان الاشياء قبل كونها معدومة وليست اشياء وهي بعد ان تعد من وجود تسمى اشياء); and, in accordance with this notion, rejected the doctrine that God always has knowledge of things before their existence—because they might not, then, be called things." ...

"The *Jâhiziyah*—followers of 'Amrû Bin Bahr 'aj-Jâhiz, one of the most eminent men among the Mu'tazilah, and their principal author, who, after having devoted himself to the study of many books of the Philosophers, made out a system of eclecticism, to which he gave currency by the aptness of his exposition and the beauty of his finished eloquence. He lived in the days of 'al-Mu'tasim and 'al-Mutawakkil [A.D. 833-61].¶ The following are some of the peculiarities of his doctrine: 1. He held

"that all cognitions have a necessity of nature (ان المعارف كلها)

* Kur., xlix. 7.

† Kur., ii. 6—s. p. 117.

‡ Kur., iv. 154—s. p. 120: Flügel's text reads ضيع الله عليها.

§ Kur., xxxvi. 8.

¶ Hâjî Khalfah says he died in A.H. 255, or A.D. 868-9: H. K., ed. Flügel., i. 205.

(ضرورية طباع), while nothing of that sort pertains to the actions of men; but that men have no merit except for volition (وليس) [all other apparently] human actions being a product of nature (و يحصل افعاله طباعاً), as Thumâmâ said. It is even handed down that he denied the originality of volition, and its constituting a distinct genus among accidents (انه انكر اصل) (الارادة وكونها جنساً من الاعراض), saying that, when an agent is rid of the state of inertia, and comes to know what he is going to do, he is, then, in the true sense a being who wills (اذا انتفى السهو) (عن الفاعل وكان عالماً بما يفعلهُ فهو المريد على التحقيق); and that, as to volition connected with the action of others, that is [merely] an inclination of feeling towards it (واما الارادة المتعلقة بفعل الغير) (فهو ميل النفس اليه). To these views he added the assertion of innate tendencies pertaining to bodies, in accordance with the doctrine of the naturalistic school of Philosophers, and affirmed that different bodies have their appropriate actions. He also held it to be absurd that substances should be non-existent, and consequently regarded accidents as the variable element of existence, while substance is necessarily permanent. . . . He agreed with the Philosophers as regards the denial of the divine attributes, and, in conformity with the system of the Mu'tazilah, affirmed that man has the determining power over moral good and evil (القدر خيرة وشر من العبد); and 'al-Ku'bî relates that he said, that the exercise of volition is attributed to the Creator in the sense that inertia and ignorance respecting his own actions are inconsistent with the idea of God, and that he can not be over-ruled and defeated [as to his own acts] (يوصف البارئ تعالى).

بانه مريد بمعنى انه لا يصحّ عليه السهو في افعاله ولا الجهل ولا يجوز ان . . . (يغلب ويظهر).

"The *Khayâtîyah* — followers of 'Abu-l-Husain Bin 'Abî 'Amrû 'al-Khayât, the teacher of 'Abu-l-Kâsim Bin Muḥammad 'al-Ka'bî, both of whom were of the Mu'tazilah of Baghdâd, and held to one and the same system of opinions, only that 'al-Khayât went to great lengths in affirming that what is non-existent

is a thing (في اثبات المعلوم شيئاً), saying that a thing is whatever one knows and predicates of (الشيء ما يعلم ويخبر عنه), and that substance in the state of nonentity is substance, and accident is accident, and so in general of all designations of genera and species, even to affirming that black is black in the state of non-entity; so that there remains only the quality of existence, or the qualities necessarily implying existence and coming into being [to be regarded as not pertaining to the non-existent]; and he used the expression 'subsisting' as applicable to the non-

existent (واطلق على المعدوم لفظ الثبوت). Respecting the denial of the attributes of the Creator, as well as in respect to human ability . . . he was of the same mind with all other Mu'tazilah.

"Ka'bī deviated from his teacher in several particulars:

1. That volition as pertaining to the Creator is not a quality sub-

sistent in his essence (إن إرادة الباري تعالى ليست صفة قائمة بذاته), that he does not exercise volition by virtue of being what he is (ولا هو يريد لذاته); and yet that it is not any thing contingent (ولا إرادته حادثة), either originating in [the divine essence as] a subject (لا في محل), or without inherence in a subject (لا في محل); but that, when it is affirmed of him, in general, that he exercises volition, the meaning is [simply] that he is knowing and powerful, and neither is compelled nor resists opposing force, in his doings (بمعناه أنه عالم قادر غير مكبر في فعله أو لا كاره); moreover, when he is said to will his actions, that the meaning is that he originates them agreeably to his own knowledge (إذا قيل هو (يريد) لا تعالى فالمراد به أنه خالف لها على وفق علمه); and, when it is said that he wills actions of his creatures, that the meaning is that he commands them, and takes complacency in them (فالمراد (به أنه أمر بها راض عنها). . .

"The *Jubbā'iyah* and the *Bahshamīyah*—followers of 'Abū 'Alī Muhammad Bin 'Abd-'al-Wahhāb 'aj-Jubbā'ī and his son 'Abū Hāshim 'Abd-'as-Salam,* who were both of the Mu'tazilah of Basrah, and differed from their fellow-theologians, as well as from one another, in certain particulars. Among the points on which they both differed from others of their party are the following: 1. That they firmly believed in contingent volitions, not inherent in [the divine essence as] a subject, by virtue of which the Creator is spoken of as a being who wills (أثبتنا إرادات حادثة لا في محل): that there is a magnifying of himself [in volition] not inherent in [the divine essence as] a subject, when he wills to magnify his own being; and a vanishing away [in volition], not inherent in [the divine essence as] a subject, when he wills that the world should vanish away (وتعظيما); (لا في محل إذا أراد أن يعظم ذاته وفناء لا في محل إذا أراد أن يفتي العالم); and that the speciality of qualification expressed by these [several] attributes [commonly ascribed to God] constitutes the Deity,

without his being inherent in a subject (واخصاً أوصاف هذه الصفات). But to affirm that whatever existences are accidents, or to be judged of as accidents, are without a subject (وأثبتات موجودات في أعراض أو في حكم).

* s. p. 155, notes †, ‡.

(الاعراض لا محل لها), is like affirming that whatever existences are substances, or to be judged of as substances, are without place, and is akin to the doctrine of the Philosophers, inasmuch as they hold that there exists a certain [primordial] Reason which is a substance without subject and without place, and the like of the Universal Soul and the Immaterial Intelligences." ...

8. That "they agreed ... in affirming that action pertains to man, in the way of origination and first production (على قول) (بإثبات الفعل للعبد خلقاً وابتداءً); and in ascribing moral good and evil, obedience and disobedience, to him, in the way of sovereignty and prerogative (إضافة الخير والشر والطاعة والمعصية إليه); and that free will (الاستطاعة) is a pre-requisite to action, and a power additional to bodily completeness and soundness of the members. Both also affirmed that corporeal structure is a condition of subsistence to the ideas which are essentially involved in [human] life (وأثبتنا البنية شرطاً في قيام) (المعاني التي يشترط في ثبوتها الحيوية) ... 5. Both were also of opinion, that God withhold from his creatures nothing which he knows would lead them to obedience and self-consecration, if he were to do it for them, of that which is beneficial, or most advantageous,

or gracious assistance (ان الله تعالى لم يدخر عن عباده) شيئاً مما علم أنه اذا فعل بهم اتوا باضاعة والموتة من الصلاح والاصلح (واللطف) ... and that one may not say that God has power to do any thing more advantageous than what he actually does

for his creature (انه تعالى يقدر على شئ هو اصلح مما فعله بعبده); and that all convictions of duty are gracious gifts." ...

As to points wherein they disagreed: 1. "Respecting the attributes of the Creator, 'aj-Jubbā'ī maintained that the Creator is knowing by virtue of his being, and powerful and living by virtue of his being; and this expression 'by virtue of his being (لذاته)' meant, with him, that he did not define the fact of God's knowing by ascribing to him the quality of knowledge, or any state of existence by which his having knowledge is necessitated (ومعنى قوله لذاته أى لا يفصلى كونه عالماً صفة في علم أو حال) (يوجب كونه عالماً) whereas, in the view of 'Abû Hâshim, God is knowing 'by virtue of his being,' in the sense that there pertains to him a certain state of existence which constitutes a qualification distinguishable from his being an existing essence (ومعنى انه ذو حالة هي صفة معلومة وراء كونه ذاتاً موجوداً) and yet known only as conditioned by the divine essence, not as separate therefrom (وانما تعلم الصفة على الذات لا بانفرادها) ... Abû Hâshim said that human reason discovers a necessary distinction

between the knowledge of a thing, in general, and the knowledge of it as respects a certain quality (والعقل بدرك فِرَقاً ضرورياً)

(بين معرفة الشيء مطلقاً وبين معرفته على صفة cognizance of the divine essence does not [thereby] recognize it as a knowing essence, any more than one who takes cognizance of substance [thereby] knows it to be something extended, receptive of accident; and that mankind undoubtedly perceive an agreement of existences in one respect, and a disagreement in another, and must know that what they agree in is different from that in which they disagree; and that no rational being denies the reality of these differences determined by the reason; and that they are not reducible to [simple] essence, or to accidents independent of essence—which latter supposition would lead to the notion that accident subsists in accident. It is therefore made out, [he said,] by necessary inference, that they are states (أنها أحوال): so that [for example] the knowledge of the Omniscient is a state, constituting a qualification independent of his being an essence (فكون العالم عالماً حال في صفة وراء)—that is to say, the mental conception of the quality is distinct from that which is formed of the divine essence (أي المفهوم من الذات)—and the same may be said of his power and life; and, in addition to this, he affirmed as pertaining to the Creator another [generic] state, by which these [special] states are necessitated.* His father, as well as all who denied the reality of [these] states, disputed his reasoning, and reduced the agreement and diversity [of existences] to mere words, and generic names (الى الالفاظ واسماء الاجناس): they said that states do not agree in being states, and disagree in certain specialities, and that so it is with respect to divine qualities; and that, otherwise, one is driven to affirm one state as belonging to another, and commits the fallacy of the circle. . . . 3. The two were also at variance with each other in respect to certain questions pertaining to the subject of divine grace. Supposing the case of a person about whom the Creator should know that, were he to believe with the aid of grace, his reward would be less, on account of the lightness of his task, and that, were he to believe without grace, his reward would be greater, on account of the greatness of the toil which he would go through, 'aj-Jubbâ'î said that it would not be right for the Creator to lay duty upon him, without bestowing grace; and he made no distinction between the case of such a person and that of one of whom it should be known that he would render no obedience to God, at all, except with the aid of grace; and said that, if God should impose obligation, without supplying grace, he would necessarily take advantage of one's condition of infirmity, and not

[as he might] do away with it (ويقول ان كلفه مع عدم اللطف لوجب) (ان يكون مستفيدا حاله غير مزيج لعلته). But 'Abû Hâshim differed from 'aj-Jubbâ'î as to some of the points involved in this case: he said that it would be right for God to require belief under the more arduous condition, without grace. 4. They differed, furthermore, with regard to the infliction of pain by way of retribution, 'aj-Jubbâ'î saying that it may be inflicted, retributively, by anticipation (يجوز ذلك ابتداء لاجل العوض), and basing thereon the pain suffered by infants; whereas his son said that it would not be right that infants should suffer, if their suffering were not retrospectively retributive (انما يحسن ذلك) (بشرط العوض والاعتبار جميعا) . . .

"Both 'aj-Jubbâ'î and his son maintained that God would not be bound to do any thing for his creatures in this life [to help them to obedience], if he had not prescribed for them their duty, either through the medium of human reason or by positive law; but that, on the other hand, since he has made it obligatory upon them, in the apprehension of their own rational faculties, to do what is required [in the revealed law], and to avoid vicious actions, and since he has, at the same time, given to them by creation a passion for that which is vicious, and an aversion to that which is virtuous (وخلف فيهم الشهوة للفصح والنفور من الحسن), and made them to have all blameable natural dispositions, it is incumbent upon him, while thus prescribing duty, to perfect [the exercise of] human reason, to suggest arguments, to come

to the support of human ability and free will (ونصب الأدلة والقدرة), and to provide means [of moral culture], so that he may do away with their weakness in respect to his commands; and that he is bound to do for them whatever is most likely to lead them to the performance of the duties imposed upon them by him, and to deter them from that vicious conduct which he has forbidden to them. . . .

"The later Mu'tazilah, such as the Kâdhi 'Abd-'aj-Jabbâr and others, pursued the path marked out by 'Abû Hâshim. But 'Abu-l-Husain of Basrah set himself in opposition, and, having critically examined the arguments of his masters, went so far as to charge them with unreliable and futile reasoning, and took up other views on several points: as, for example, that he denied the reality of state (الحال),* and that the non-existent is a thing; . . . and affirmed that existences are distinguished from one another in essence (ان الموجودات تتمايز باعيانها)—which followed from the denial of state; and that he reduced all the divine

attributes to the fact that the Creator is knowing, powerful, and all-embracing. He also leaned to the doctrine of Hishâm Bin 'al-Hakam, that things, before their existence, can not be known. He was, in fact, a Philosopher in his views, only that he passed off his opinions upon the Mu'tazilah by clothing them in the garb of dogmatic theology." ...

With these statements we come to the end of what Shahras-tânî informs us of the opinions of the Mu'tazilah, bearing upon the subject of predestination. It remains to collect from our author the views entertained on this subject by parties opposed to the Mu'tazilah, and to all those who held to a determining power of the will.*

"The *Jabariyah* (الجبرية) lit. Absolutists). The doctrine of absolutism is the denial that man is really responsible for action, and attributing human action to the Lord as its author (الجبر)

(هو نفى الفعل حقيقة عن العبد وإضافته الى الرب تعالى). There are, however, some shades of difference among those who hold this doctrine: for we have the Unmixed Jabariyah, who do not maintain that either action or ability to act belongs, in any sense, to man (لا تثبت للعبد فعلا ولا قدره على الفعل أصلا); and the Moderate Jabariyah, who hold that man has an ability which is not at all efficacious (تثبت للعبد قدره غير مؤثرة أصلا). But whoever affirms that created ability has any efficaciousness in respect to action, and calls that an appropriation (نسباً), † is no maintainer of absolute sovereignty on the part of God (فليس جبري); although the Mu'tazilah call by the name of Jabariyah all those who do not maintain that created ability has sovereign efficacy, in the way of origination and first production of action; and they ought, in order to be consistent, to call by the same name those of their own party who say that actions generated by influence upon man from without are referable to no doer, ‡ inasmuch as such actions are held by them to be produced independently of any efficaciousness of created ability." ... We have heard that the Jabariyah claim as followers of theirs the Najjariyah and the Dhirariyah, whom we accordingly reckon as such. ...

"The *Jahmiyah*—followers of Jahm 'Ibn Safwân, one of the Unmixed Jabariyah, whose new views were first promulgated at Turmudh, and whom Sâlim Bin 'Ahwaz 'al-Mâzinî put to death at Marv, in the latter part of the reign of the Umayyades. § He agreed with the Mu'tazilah in the denial of the eternal attri-

* pp. 59-85 as above.

† s. p. 173.

‡ s. p. 164.

§ About the middle of the eighth century.

butes [of the Deity], but went beyond them in several particulars: 1. He declared it to be inadmissible that the Creator should have predicated of him any attribute which is ascribed to his creatures, because that would inevitably lead to an anthropomorphism (تشبيها); and therefore he denied that God possesses [the attributes of] life and knowledge, but maintained that he is powerful, an agent, and a creator—because to none of his creatures is given the attribute of ability, or the faculty of action, or creativeness (فنفى كونه حيّا علما واذبت كونه قادرا فاعلا)

2. (خالقا لانه لا يوصف شئ من خلقه بالقدره والفعل والخلق). He maintained that the Creator has contingent cognitions, not inherent in a subject (علوما حادثة للبارى تعالى لا فى محل): he said that it was impossible that God should know a thing before its creation, for [said he], if he knows and then creates, does his knowledge [after the creation of a thing] remain the same as before, or not?—if the former, then is it ignorance, because to know that a thing will exist must differ from knowing that it already exists; but, if his knowledge does not remain as before, then there is a change in it, and what is subject to change is created, not eternal [and thus it is proved, that no eternal quality of knowledge pertains to the divine essence]. He agreed in this with Hishâm Bin 'al-Hakam, who ... said that if the contingency of knowledge [as a divine quality] is to be maintained, one must suppose either that it originates in the essence of God—which would lead to the idea of a change in the divine essence, and to the conception of that essence as subject to contingences (وان يكون محلا للحوادث), or else that it originates in some subject [other than the divine essence]—in which case it would be ascribable thereto, and not to the Creator (واما ان يحدث فى محل فيكون ائحل موصوفا به لا البارى تعالى); so that evidently

it is not quality inherent in a subject (فتعين انه لا محل له): and accordingly Hishâm held to [manifold] divine cognitions, which are contingent, corresponding to the number of existing things known to God (فاذبت علوما حادثة بعدد المعلومات الموجودة). 3. He said respecting created ability (القدره الحادثة), that man has no determining power to do any thing, and possesses not the attribute of free will (ان الانسان لا يقدر على شئ ولا يوصف بالاستتباعه)

, but is only the subject of absolute divine sovereignty in his actions (واما هو مجبور فى افعاله), without ability on his own part, or will, or power of choice (لا قدرة له ولا ارادة ولا اختيار); and that God absolutely creates actions within him, just as he produces activity in all inanimate things (واما يخلق الله تعالى الافعال فيه على)

(حسب ما يخلق في سائر الجمادات); and that it is in a metaphorical sense that man is said to act (وينسب اليه الافعال مجازا), just as with inanimate things: for example, when it is said that a tree brings forth fruit, or that water runs; . . . and that reward and punishment are subject to absolute divine sovereignty, like human actions (والثواب والعقاب جبر كما الافعال جبر). He said, moreover, that, if the absolute sovereignty of God is to be maintained, moral obligation must also be under sovereign control (اذا ثبت الجبر فالتكليف ايضا كان جبرا) . . .

"The *Najjârîyah*—followers of 'al-Husain Bin Muḥammad 'an-Najjâr,* whose doctrine gained the acceptance of most of the Mu'tazilah of Rai and its vicinity. . . . They agreed with the Mu'tazilah in the denial of the [divine] attributes, namely, knowledge, power, will, life, hearing, and sight, and at the same time agreed with the *Şifâtîyah* in viewing conduct as created [by God] (في خلف الاعمال). 'An-Najjâr said that the Creator exercises volition in and of himself, just as he knows in and of himself (البارئ تعالى مريد لنفسه كما هو عالم لنفسه); and so he could not avoid the inference that every thing depends upon the divine will (فالزم عموم التعلق), and was compelled to say that God wills moral good and evil, as well as benefit and injury. He also said that what is meant by his exercising volition is, that he is not a being who acts under constraint, or is forced (انه غير مستكره ولا مغلوب). Furthermore, he said that God creates the conduct of his creatures, good and bad, virtuous and vicious, while man appropriates the same (والعبد مكنسب لها); and held that there is an influence exerted [with respect to conduct] by created ability (ناذيرا للعدرة الحادثة), which he called appropriation (كسب), agreeably to the view maintained by 'al-'Ash'arî, with whom he accorded also in holding that free will is an accompaniment of human action (ان الاستطاعة مع الفعل) [and not a prerequisite, in the sense of power to originate volition]. . . . Muḥammad Bin 'Isa, known by the appellation of Burghûth, Bishr Bin 'Attâb 'al-Marîsî, and 'al-Husain 'an-Najjâr, stood near to one another in their opinions; and all maintained that God's willing ceases not as respects whatsoever of moral good and evil, belief and infidelity, obedience and disobedience, he knows is to come to pass (كونه تعالى مريدا لم يزل لكل ما علم انه سيحدث من) كفر وطاعة ومعصية (خير وشر وإيمان وكفر وطاعة ومعصية)—which most of the Mu'tazilah would not admit."

"The *Dhirârîyah*—followers of Dhirâr Bin 'Amrû and Ḥafṣ

'al-Fard,* who agreed in abstracting all qualities from the Divine Being (في التعطيل), inasmuch as they said that the Creator is knowing and powerful in the sense of not being ignorant and weak, and held the intrinsic nature of God to be something which he himself alone has cognizance of (واثبتنا لله تعالى ماهية لا يعلمها الا هو)—a doctrine which they declared to have been handed down on the authority of 'Abū Hanīfah—to whom may God be merciful! and of certain men of his school, and the import of which they said to be that God knows himself by intuition, not by demonstration, nor by communicated information (شهادته لا بدليل ولا خبر), while it is through these [imperfect media] that we know him. . . . These two teachers also maintained that the actions of men are really created by the Creator, and that mankind appropriate them, in the strict sense. At the same time they admitted the possibility of an action's taking place as the joint product of two actors (وجوزوا حصول فعل بين فاعلين). They held, moreover, that God can transmute accidents into bodies, and that free will and inability appertain to the body, and are corporeal (والاستطاعة والعجز بعض الجسم وهو جسم) : . . .

"The *Ṣifā'iyyah* (الصفاتية) lit. Attributists). Be it known that most persons adhering to the primitive faith were wont to maintain that certain eternal attributes pertain to God, namely, knowledge, power, life, will, hearing, sight, speech, majesty, magnanimity, bounty, beneficence, glory, and greatness—making no distinction between attributes of essence and attributes of action; . . . and were wont to hold to certain descriptive attributes (صفات خبرية), as, for example, hands and face, without any other explanation than to say that these attributes enter into the revealed representation of the Deity, and that, accordingly, they had given them the name of descriptive attributes. Thus it came to pass that, after the Mu'tazilah denied the [divine] attributes, while men of the primitive faith affirmed their real existence, the latter received the appellation of *Ṣifā'iyyah*, and the Mu'tazilah that of Mu'atṭilah (معطلات lit. Voiders). But some of those who were of the primitive faith, in maintaining the reality of the [divine] attributes, went to the extreme of likening them to attributes of created things (التشبيه بصفات المحدثات); while others were content to hold that there are certain [divine] attributes, which are proved by acts, and went not beyond the statements of Revelation. Two parties thus arose, of which the one explained the [divine] attributes figuratively, according to the expressions applied to them, and the other came to a stand in respect to figurative interpretation, saying: 'We know,

* Both probably not later than the ninth century: s. Lit.-Gesch. d. Ar., v. 248.

by force of reason, that there is nothing to which God bears resemblance—that he is not like any thing created, nor any thing created like him; and for us that is decisive; but what may be the meaning of such language as we meet with [in the *Kurân*], touching the matter, like those words of God: ‘The Merciful is seated upon the throne’* ... we know not.” ... At a later period, certain persons went beyond what had been professed by any who held to the primitive faith, and said that, undoubtedly, those expressions [denoting the attributes] are used in the literal sense, and are to be interpreted just as they stand, without resort to figurative interpretation, and at the same time without insisting upon the literal sense alone, whereby they fell into pure anthropomorphism (التشبيه الصرف), in violation of the primitive Muslim faith. ...

“The ‘*Asha’rîyah* [a subdivision of the *Sifâtîyah*]—followers of ‘Abu-l-Hasan ‘Alî Bin ‘Isma’îl ‘al-‘Asha’rî,† so named from ‘Abû Mûsa ‘al-‘Asha’rî,” ... whose doctrinal views were the same as those of ‘Abu-l-Hasan, and of whom the story is told that, in answer to ‘Amrû Bin ‘al-‘Âs, who asked: “Does God determine something for me, and then punish me on account of

it (ايقتدر على شيء ثم يعذبني عليه)?” he said: “Yes,” and that, when ‘Amrû inquired: “Wherefore?” he replied: “Because he does thee no injustice.” ... ‘Abu-l-Hasan said: “These attributes [of the Deity] are eternal, subsistent in the essence of God

(فأبنة بذاته تعالى): we say not that they constitute the Deity, and are nothing more [than simply divine essence]; neither do we deny that they constitute the Deity, and are not additional to his essence (لا يقال في هو ولا غيره ولا لا هو ولا لا غيره). As for proof that God speaks by an eternal word, and wills by an eternal will (ومريد بأمره فدية), said he, it is evident that God is a sovereign, and, as a sovereign is one to whom it belongs to command and prohibit, so God commands and prohibits; there is, then, no alternative but that he commands either by an eternal ordering or by an ordering in time, and, if his ordering is in time, that it originates either in his own essence, or in some [other] subject (أو لا في محل), or without inherence in a subject (أو لا في محل); but that it originates in his own essence is absurd, because one would have, on that ground, to admit that God is subject to contingences (أن يكون محلاً للحوادث), which is absurd; and that it inheres in some [other] subject is also absurd, because, if so, it must be attributed to that subject [and not to the Deity];

* Kur., xx. 4.

† Of the latter part of the ninth, and first half of the tenth, century: Ibn Khallik., p. 452.

and that it originates without inherence in a subject is absurd, because inconceivable: therefore, it plainly appears that his ordering is eternal, subsistent in him, a quality pertaining to him; and the same analysis applies to [God's] willing, hearing, and seeing. He also said that God's knowledge is indivisible, embracing all things cognizable—the impossible and the possible, the necessary, the existent and the non-existent

وعلمه واحد يتعلق بجميع المعلومات المستحيل والجائز والواجب والموجود) (والمعدوم يتعلق); and that his power is indivisible, extending to all things which are normal, within the range of possibility (يتعلق

جميع ما يصح وجوده من الجائزات reaching to all things which admit of special determination (بتعلق بجميع ما تقبل الاختصاص). . . . He said, moreover, that the will of God is indivisible, eternal, embracing all things subject to volition, whether determinate actions of his own, or actions of his creatures—the latter, so far as created by him, not as they are their own actions by appropriation (وارادته واحدة

أزلية متعلقة بجميع المراتات من أفعاله الخاصة وأفعال عباده من حيث (أنها مخلوقة له لا من حيث أنها مكنسبة لهم); and, further, that God wills all things, morally good and evil, beneficial and injurious; and, as he both knows and wills, that he wills on the part of his creatures what he knows, and has caused to be registered in the memorial-book (كما أراد وعلم* أراد من العباد ما علم وأمر القلم حتى) (تنب في اللوح المحفوظ)—which foreknowledge constitutes his decree, his decision, and his determination, wherein there is no varying nor change (فذلك حكمه وقضائه لا بتغيير ولا بتبدل); and that it is a violation of common sense to speak of something as predestined generically, which it is impossible should actually happen (وخلاف العلوم معدور الجنس محال الوقوع) [there being a foreknowledge that it will not happen]. These statements prove that his doctrine admitted of obligation to do that which is impossible.* Yet he held it to be absurd to suppose that there can be moral obligation without any power at all over action. "He said that man's having power over his actions follows from his perceiving within himself a necessary distinction between movements which result from threatening and terror and those which come of the power of choice and volition—a distinction amounting to this, that movements which result from the power of choice take place under the condition of ability, and are dependent

* i. e., since God predestines only what he foresees will take place, he predestines some men to be vicious, for whom, then, it is impossible, in respect to foreknowledge, that they should be virtuous; and yet all men are under obligation to be virtuous.

upon the power of choice in a being possessing ability (والعبد قادر على أفعاله إذ الإنسان يجد من نفسه تفرقة ضرورية بين حركات الرعدة والرعشة وبين حركات الاختيار والارادة والتفرقة راجعة الى أن الحركات and, furthermore, he said that appropriated action is that which is predestined by means of created ability, and takes place under the condition of created ability (المكتسب هو المقدور بالقدرة المحاصل تحت) (القدرة الحادثة). On the principles of 'Abu-l-Hasan, however, no influence in respect to origination [of action] pertains to cre-

ated ability (لا تأثير للقدرة الحادثة في الاحداث) because all original existence comes of one determining act (لأن جهة الحدوث) (قضية واحدة), the same for substance and accident, so that, if there pertains to created ability any influence in determining original existence, the same must be attributed thereto with respect to the original existence of every thing, even to supposing it adequate to produce colors, tastes, and smells, as well as substances and bodies; and so one would be led to admit that the heavens and the earth owe their existence to created ability—not to say, that God limits himself to creating, in the way of subordination to human ability, or under the condition thereof, and in concurrence therewith (أجرى سنته بأن يخلق عقيب القدرة الحادثة أو تحتها ومعها), whatever [human] action is to take place, when man wills it and applies himself thereto. Such action [as his theory supposes on the part of man] is called by 'Abu-l-Hasan an appropriation (كسبا): it is therefore created by God [alone], so far as respects causing to be and origination (فيكون خلقا من الله تعالى ابتداء) (واحدا) and appropriated by man, in respect to taking place under the condition of human ability (وكسبا من العبد حصولا) (تحت قدرته).

"The Kādhī 'Abû Bakr 'al-Bâkillânî* departed somewhat from this definition, for he declared it to be incontrovertibly proved that created ability is not adequate to causing [action] to be (لا تصلح للايجاد) and yet that all the qualities of action, or its modes and distinguishing features, are not involved in its mere existence (لكن ليست تقتصر صفات الفعل أو وجوهه واعتباراته على) (جهة الحدوث فقط)—on the contrary, that there are other modes [of things] besides existence; namely, that substance is substance, extended, and receptive of accident, and that accident is accident—color, blackness, and so forth—which [modes] constitute states (احوال) in the view of those who hold to states of being: now, said he, that action takes place by means of created ability, or under the condition thereof, is a special rela-

* Died in 1013: Ibn Khallik, p. 674.

tion [pertaining to its existence]; and its thus taking place is called an appropriation, and constitutes the influence of created

ability (فجهة كون الفعل حاصلًا بالقدرة الحادثة أو تحتها نسبة خاصة)

(يسمى ذلك كسبا وذلك هو أثر القدرة الحادثة); and since, he also said, it is a question, on the principles of the Mu'tazilah, whether ability, or the original power [which they ascribe to man], exercises its influence in producing a [constant] state, that, namely, of existence and being, or [simply] effectuates some one of the modes of action (فإذا جاز على أصل المعتزلة أن يكون)

تأثير القدرة أو القادرة القديمة في حال هو الحدوث والوجود أو في وجه (من وجوه الفعل), why must the influence of [our] created ability be exercised in the production of what is a [constant] state, to wit, the speciality of the existing, and not rather upon one of the modes of action, namely, for example, that motion takes a

particular form? فلم لا يجوز أن يكون تأثير القدرة الحادثة في حال) هو صفة للحادث أو في وجه من وجوه الفعل وهو كون الحركة مثلا على

and as one may not ascribe to the Creator any part of that which [wholly] belongs to the creature, so may not be ascribed to the creature any part of that which [wholly] belongs to the Creator. Accordingly, the Kâdhi maintained that created ability exercises an influence [upon human action], and that its influence [thereupon] is the characteristic circumstance pertaining to it; which circumstance constitutes a certain aspect of [human] action, springing out of the connection between created ability and action—an aspect in harmony with reward and

وأقرها في الحالة الخاصة وهي جهة من جهات الفعل حصلت من

تعلق القدرة الحادثة بالفعل وتلك الجهة هي المنعينة لأن تكون مقابلة (بالتواب والعقاب) ... But the Imâm of the two sacred cities, 'Abul-Ma'âlî 'aj-Juwainî* ... deviated a little from this explanation [of the Kâdhi], and said that the denial of ability and free will is something which reason and consciousness disavow (أما نفى)

(القدرة والاستطاعة فما يلبه العقل والحس); that to affirm an ability without any sort of efficacy is equivalent to denying ability altogether, and that to affirm some unintelligible influence [of ability] which constitutes some circumstance or other amounts to the denial of any special influence; and that, inasmuch as states, on the principles of those who maintain them, are not to be characterized as existing or non-existing [but must be explained

by reference to their origin], action on the part of man [regarded as an existing state] is to be attributed, really, to his own ability (فلا بد اذا من نسبة فعل العبد الى قدرته حقيقة)—not that this is put forth in the way of origination and creation (لا على وجه)—(الاحداث والخلق)—for creation is understood to be a causing of something to arise, by supreme power, out of non-existence, and mankind are just as conscious of not having supreme power as they are of having efficiency (الاقتدار)—but that action depends for its existence upon ability [in man] (فالفعل يستند وجودا الى) (القدرة), which itself depends for its existence upon some other cause, its relation to that cause being the same as the relation of [human] action to [man's] ability, and so one cause depends upon another until the Cause of causes (مسبب الاسباب) is reached, namely, the Creator of causes and their operations (الخالق المستغنى على), (للاسباب ومسبباتها), the Absolute Self-sufficing (الاطلاق); for every [secondary] cause is in one respect self-sufficient, and in another respect dependent (مستغنى من وجه محتاج)

(من وجه الغنى), while the Creator is the Absolute Self-sufficing (المطلق), who depends not, nor is deficient in any thing. This view of the subject was borrowed by 'Abu-l-Ma'âli from the Philosophers of the theistic school, but he originated its presentation in the garb of dogmatic theology. . . .

"We return, now, to the theological views of the originator of the system. 'Abu-l-Hasan 'Alî Bin 'Isma'îl 'al-'Ash'arî said [furthermore] that, inasmuch as the Creator (الخالف) is truly the Originator (البارى), with whom no other [person or thing] is associated in creation, his most distinguishing characteristic is the power of original production (الفدرة على الاختراع), by which, said he, his name of 'Allâh is to be explained." . . . 'Al-'Ash'arî said, also, that, "if he [who has committed a great sin] repents, he would not affirm it to be obligatory upon God, by virtue of any decision of reason, to accept that person's repentance, since he is the Imposer of Obligation, and no obligation is imposed

upon him (اذ هو الموجب فلا يجب عليه شئ); but rather that Revelation declares that the repentance of the penitent will be accepted, and the cry of the needy answered; and that God rules as a sovereign over his creatures, doing what he wills and determining as he pleases (وهو المالك فى خلفه يفعل ما يشاء وحكمه ما يريد); so that, were he to cause all men to enter Paradise, there would be no injustice, and, if he were to send them all to Hell, there would be no wrong-doing: because injustice is the ordering in respect to things which do not come within the

sphere of control of the orderer (هو المتصرف فيما لا يملكه المتصرف), or the inverting of established relations of things (وضع الشيء في) (المالك المطلق), and God is the Absolute Sovereign (غير موضعه), on whose part no injustice is imaginable, and to whom no wrong can be attributed; . . . and that nothing whatever is obligatory upon God, by virtue of reason (ولا يجب على الله تعالى شيء ما بالعقل)—neither that which is beneficial, nor that which is most advantageous, nor gracious assistance . . . and that the ground of [human] obligation is nothing which constitutes a necessity binding upon God (واصل التكليف لم يكن واجبا على الله) . . . Furthermore, it was part of the doctrine of 'al-'Ash'arî that "faith and obedience are the result of divine aid, and unbelief and disobedience the result of God's failing to assist (والإيمان والطاعة بتوفيق الله تعالى والكفر والمعصية بخذلانه); and he held this divine aid to be a creation of power to obey (خلق القدرة على الطاعة), and God's failing to assist to be a creation of power to disobey (خلق القدرة على) (المعصية); but some of his followers regarded the furtherance of causes of moral good (تيسير أسباب الخير) as constituting the divine aid, and the reverse as constituting the failure to assist."

"The *Karrâmîyah*—followers of 'Abû 'Abdallâh Muḥammad Bin Karrâm, whom we count as one of the *Sifâtîyah* because he was an assertor of the divine attributes, though he ended with ascribing materiality to God, and the profession of anthropomorphism. . . . They held, also, that to God pertains an eternal choice, which has to do with the original principles of created things, and with contingences of his own essence (مشيئة قديمة متعلقة بأصول المحدثات والحوادث التي تحدث في ذاته); and they affirmed that there are volitions [on the part of God] which come into existence in time, having to do with the specialities of created things (أرادات حادثة تنعلف بتعاضل المحدثات). But it was universally agreed among them that things contingent [to the divine essence] are not necessary qualifications of the Deity, and do not constitute attributes pertaining to him; so that those contingent acts of speaking, willing, hearing, and seeing [referred to in the *Kurân*], happen to the essence of God, without his becoming thereby a speaker, exerciser of volition, hearer, or seer, while his actual production of these contingences does not constitute him a producer, or creator; but he is a speaker only by virtue of his speaking-quality, a creator only by virtue of his creating-quality, and an exerciser of volition only by virtue of his willing-quality—each of which qualities is the same as his power in respect to the several things

وإنما هو قابل بقاينيته وخالف بخالقيته ومريد بمريدته) referred to (وذلك قدرته على هذه الأشياء). It was, however, a fundamental principle with them, that the contingences which God originates in his essence necessarily abide (واجبة البقاء), so that their non-existence were an absurdity; since, if they could become non-existent, there would be permutable contingences of the divine essence, and the substance [of the Deity] would partake of this alteration (اذ لو جاز عليها العدم لتعاقبت على ذاته الحوادث ولشارك) (الجوهر في هذه القضية) Another fundamental principle of theirs was, that whatever ordinance God originates in his essence is either causative, that is, active and resulting in something done, or non-causative (namely, either declarative, or directive and prohibitive), constituting actions, so far as that it gives evidence of power [to act in the way of enforcement], yet not resulting in any thing done (ومن أصلهم أن ما يحدث في ذاته من الأمر) فنقسم إلى أمر التكوين وهو فعل يقع تحته المفعول وإلى ما ليس أمر التكوين وذلك أما خبر وأما أمر التكليف ونهى التكليف وهى أفعال من (حيث دلت على القدرة ولا يقع تحته مفعولات

[Ibn al-Haiṣam, one of the Karrāmīyah] "said, also, that the Creator knows from eternity what will be, in the way in which it will be (البارئ تعالى عالم فى الأزل بما سيكون على الوجه الذى) (سيكون); and wills the carrying out of his knowledge in [the existence of] those things which are the subjects of his knowledge (وشاء لتنفيذ علمه فى معلوماته), so that his knowledge becomes not ignorance; and exercises volition in respect to what is created in time by him who creates through a volition arising in time [i. e. man] (ومريد لما يحدث فى الوقت الذى يخلق) (بارئ حادثه); and to every thing created by his word says 'Be,' whereby it exists (حتى يحدث)—which constitutes the difference between causation and that which is caused to be, and between creation and that which is created (بين الاحداث والحدث والخلق) (والمخلوق). He said, moreover, that he and his party held to predestination of moral good and evil by God (القدر خيره وشره من) (الله), and that God wills all things which are, bad as well as good, and creates all existences, including both virtue and vice (وانه) (اراد الكائنات كلها خيرا وشرها وخلق الموجودات كلها حسنها وقبحها); while, at the same time, they maintained that man is an agent by virtue of created ability (ونثبت للعبد فعلا بالقدرة الحادثة), whose action they called an appropriation, and that created ability operates to secure an advantage not included in the action's being done, or created, by the Creator (والقدرة الحادثة مؤثرة)

(فى اثبات فائدة زائدة على كونه مفعولا مخلوقا للبارى—that advantage being what gives play to conviction of duty, and this opening to moral conviction being the ground of reward and punishment تلك الفائدة هي مورد التكليف والمورد هو المقابل بالثواب والعقاب). . . .

A review of the whole ground which we have thus gone over naturally leads to the inquiry how it came about that predestinarianism, though only one side of the doctrine of the relations of God to human conduct and destiny, as presented in the *Kurân* and tradition, and notwithstanding all efforts of philosophy to develop the consistency of free will with predestination, should have finally predominated as it did in the speculations and practice of the Muhammadan world. The answer to this inquiry must be found, we apprehend, in a certain degeneration of the Arab mind, in general, which began even in the next age after that of Muhammad, under the mingled oppression and relaxing influence of governmental absolutism, alike secular and religious, unfitting it to assert its birthright of freedom, and limiting it to such activity as might consist with bondage to the ruling power of the state. It is obvious that no doctrine of free will could become predominant under the dominion of absolute princes, while, in such a condition of things, the tendency was almost irresistible to magnify the doctrine of divine decrees. Let it be considered, also, that such degeneration of the national mind was the more natural because, as we have seen, fatalism was the normal belief of the Arabs, so to speak, in their state of semi-civilization before Muhammad.

These remarks suggest another, on a kindred topic of inquiry. Too much stress, we think, has been laid upon their belief in predestination as accounting for the heroism of the first Muslim conquerors: the predominance of that belief belongs, in our view, to "the age of ignorance," and to a nearly related period of degeneration; while we are disposed to ascribe the heroic achievements of the personal followers and early disciples of Muhammad fully as much, at least, to an awakened consciousness of power in their own wills, as to the persuasion of a favoring divine predestination, or to a self-abandonment to absolute divine decrees.

In correcting the proof-sheets of the latter half of this article, I have been assisted by criticisms and suggestions of my friend Noah Porter, Professor of Moral Philosophy and Metaphysics in Yale College, whose signature is affixed to two of the notes on the preceding pages.

ARTICLE IV.

THE REVELATION OF THE BLESSED APOSTLE PAUL.

TRANSLATED FROM AN ANCIENT SYRIAC MANUSCRIPT,

BY REV. JUSTIN PERKINS, D.D.,

MISSIONARY OF THE A. B. C. F. M. AT ORŪMIAH.

Presented to the Society October 15th, 1863.

INTRODUCTORY NOTE BY THE COMMITTEE OF PUBLICATION.

THE Ancient Syriac manuscript from which is made the following translation was sent to this country some years since, by the late Rev. David T. Stoddard, missionary among the Nestorian Christians of Orŭmiah and its vicinity. It was obtained among the Nestorians, and is of course written in their character, upon the usual coarse brown paper, and covers thirty-two leaves, which are about nine inches high and six inches broad. It was placed in the hands of Dr. Perkins for translation about two years since (in 1862), when he was on the point of returning to Persia, and his version was received from Orŭmiah late in 1863. From his accompanying letter, dated at Orŭmiah, April 1st, 1863, the following is an extract:

"I return you herewith the Revelation of St. Paul. . . . The following pages are a translation which I have just made, quite literal rather than smooth, for reasons which will readily commend themselves to you. I need say but little by way of comment on this medley of pious fraud and of folly. It will speak for itself. The Syriac is so good that I am inclined to give it the credit of considerable age. We seldom see so good a Syriac style written by the best Nestorian scholars at the present time." . . .

Respecting the age of the work, we have no other clue than that hinted at by Dr. Perkins, as furnished by the character of the language in which it is written. It may be conjectured to be a Syriac version of one of the many apocryphal works upon its theme known to have been

current among the early Christians, respecting which Fabricius (Codex Apoc. N. T., vol. i., p. 943 etc.) gives the following notices :*

1. An *Anabpticum Pauli* mentioned by Epiphanius (Hæres., 18. 38), which was in the hands of the Gnostic sect of Cajani or Cainites (in the second century), and was held to contain the revelations made to Paul when he ascended to the third heaven (2 Cor., 12 : 2-4). This same book is cited by Michael Glycas (in the twelfth century), Annal., ii., p. 120.

2. Another *Apocalypsis Pauli*, in use among certain monks in the fourth century, and referred to by Augustin (Tract. 98 in Johannem), Sozomen (Hist. vii., 19), Theophylact. (on 2 Cor., 12 : 4), and other writers. This (according to Sozomen) was said by some to have been found in the times of the Emperor Theodosius, in a marble box under the house in which Paul had lived at Tarsus.

3. Grabe (Spic., i., p. 85) states that, in the library of Merton College, Oxford, there is a manuscript, *Revelatio Pauli* (Cod. 13, N 2, Ant. fol. 77 b), which professes to contain the disclosures made by St. Michael to the Apostle during the three days following his conversion. In this was included also a view of the punishments of purgatory and hell—another feature not belonging to the work mentioned by Augustin. The Oxford manuscript is supposed by Fabricius to be a much later production.

4. Marcus, Patriarcha Alexandrinus, at the beginning of the thirteenth century, states that various works bearing the title of *Visiones Pauli* were extant "in orientalibus et meridionalibus regionibus."

The work sent by Dr. Perkins contains a visit to hell as well as heaven, differing in this respect from the work mentioned by Augustin, and so far agreeing with the Oxford manuscript; but it differs from the latter in being founded on the passage in 2 Cor., 12 : 2-4, instead of the narrative of the Apostle's conversion; with Augustin's *Apocalypsis*, again, it appears to agree, as concerns the tradition of its original discovery.

PREFACE BY THE SYRIAC TRANSLATOR, OR A TRANSCRIBER.

Beloved of my soul, I will make known unto you, from the Holy Scriptures, divine visions,* which the Holy Ghost hath made known to the prophets in mystery, respecting the providential dealing [the leading] of Christ our Lord, before he assumed a body, in the end of times. So the blessed Paul saw what was about to happen to the race of mortals, after the resurrection.

Hear, then, ye who say that perhaps the Revelation of the blessed, holy Paul is not true. Hear, my master, the reader; I

* These notices were extracted by Rev. Prof. Fisher, of New Haven, and were communicated by him to the Society, in October, 1863, accompanying the presentation of the translation itself.

acquaint you, on this subject, from the Holy Scriptures and true witnesses. Hear, my master, about the soul when it departs from the body. Affection of [after] glory, and of intelligence, wins souls there, either for evil or for good. For, until the resurrection, there is neither enjoyment nor torment, but this awaking [earnest expectation]. Therefore our Lord Jesus Christ anticipated and made known unto great Paul. In a mystery he made known to him every thing that would happen to the race of mortals, from the reward of the good even unto the evil.

But that we may discourse on the subject on which we now enter—That was a vision which Moses, the chief of the prophets, saw. He beheld a fire, kindled in a bush, without consuming it. Was it not a mystery [emblem] that divinity was about to descend and dwell in humanity, and the humanity would not be consumed before the might of divinity?

And when Israel warred with the Philistines, and with every foreign people, Moses crossed himself with a sign of the cross, before the eyes of all Israel, by adjusting his hands like a cross, at that time. And as Moses crucified the brazen serpent in the wilderness, so also our Lord says, in the Holy Gospel: "As Moses lifted up the serpent in the wilderness, so also must the son of man be lifted up."

And other things about our Lord are a vision that Daniel the prophet saw. He saw a stone cut out without hands; and the beating to pieces the great image, was not this the descent [of Christ] without removal [alienation from his original place], and the abolishing of idols?

The fleece—that which Gideon saw, which received dew from on high—was it not the mystery that a virgin was about to conceive without seed?

So also when the ark of Noah passed the four corners of the world.

And when Melchizedek, the priest, offered a cake of bread and a cup of wine, and Abraham, the father of nations, inquired: "What is this mystery?" Melchizedek, the priest, said: "Christ is about to descend from heaven, and assume a body from a virgin, and offer his body, in bread and wine, for his disciples. Blessed is he who partakes of it." Where was the mystery of the sacrament of the body and the blood of our Lord, at that period?

So also that which David, the prophet, saw by the Spirit, about the passion of our Lord, and his crucifixion, saying: "They pierced my hands and my feet, and all my bones bewailed," etc. That also which David spake about the resurrection, saying: "Thou hast not given thy just one to see corruption;" and other things that are said of it.

Like as Jonah constituted a likeness of the burial of our Lord in the belly of a fish.

The garments which Jeremiah buried, are they not a mystery of the rending off of Israel, and of the changing of the law?

So, too, what the prophet Joel saw about the sufferings of our Lord, and wept, and preached, and said: "I will give signs in heaven and wonders on the earth—blood, and vapor, and smoke; and the sun shall be turned to darkness, and the moon to blood, before the great and dreadful day of the Lord come."

Like as Isaiah, the honored one among prophets, saw, and spake from his mouth, who gave witness of his son, saying: "This is my beloved son, in whom my soul is well pleased. I will put my Spirit upon him." Like that which he said of St. John, the Baptist: "Behold my servant, in whom I am well pleased."

Like those twelve stones, which Joshua, the son of Nun, took, when he divided Jordan before him; was not this the mystery of the twelve apostles, who should be with our Lord beforehand with others?

Like that stone on which Jeremiah, the prophet, stood, which was the New Jerusalem, the church of the nations—the holy, universal church, of which Isaiah prophesied. Therefore our Lord also called St. Simon, the chief of the apostles, a stone. For as a huge stone will not shake, nor move, from the violent waves of evil and hard winds; nor melt, nor dissolve, from the moisture of water; so the chosen church of Christ will not shake, nor move, from opposing waves and the sons of perdition, that may roar against it with the hard winter of the Wicked One.

Behold and see, O thou who doubttest concerning the Revelation of great Paul, all these mysteries and similitudes, which the prophets have seen in all ages. In mystery did not the Holy Ghost make known unto them, and speak? He who doubteth in his mind, how there was a cross at that time, and the mystery of the cross, and other divine mysteries and visions of that period—[to him I say] so the blessed Paul saw by a mystery; the thing that he saw was whatsoever shall be the reward, after the resurrection.

This is a great wonder, that in one case we receive his testimony, and in the other deny his preaching. How so? Is blessed Paul divided? Is half of him true, and half of him a deceiver and a liar? God forbid it of the holy and blessed Paul, the divine apostle. All we faithful ones, partakers of holy baptism, believe, with all our hearts, and all our strength, and all our minds, in the Holy Gospel of Paul the apostle, and the other apostles, his companions, that they preached it for us. And whoever is doubtful of the Revelation of great Paul, let him know that there is no sacrifice for propitiation for his sins; but know thou that his torments shall be without mercy.

Consider and count him one with the heathen, and persecutors of apostles and martyrs. Whoever believes not in the Revelation of the blessed Paul will suffer his torments within, till he goes to the torments of the judgment of hell, in everlasting fire. These true proofs will suffice for him who knows his wisdom, and is pure in heart. But fools and swine shall perish, according to the words of our Lord, which he spake to us in the Holy Gospel: "Give not that which is holy unto dogs, and cast not your pearls before swine." Behold, O thou that art skeptical about the Revelation of Paul, how much better is the name of a man than that of a dog or of a swine! Therefore let us all in truth believe, that we may not be called by these hated names by our Lord. But let us please [him], and believe in every spiritual mystery—those divine visions which the Holy Ghost hath made known to them who delight in his love and are doers of his will.

Praise to the Father;
To the Son, worship;
To the Holy Ghost, lifting up [ascription],
From all earthly tribes that are visible—
At all times, forever and forever—
Amen.

The apology for the Revelation of Paul, the divine apostle, is finished.

Again, I will write [copy] the Revelation of blessed Paul, the apostle—

May the Lord help me through his prayers—Amen.

REVELATION OF THE BLESSED APOSTLE PAUL.

The word of the Lord came unto me, saying: Son of man, go, speak to the people of the land—How long will ye sin? How long will ye add sin to sin? How long will ye provoke God, and say: We are the children of the living God? But the works of the devil ye do, and walk in his commandments. Know ye, and behold, all natures, and all creatures, are subject to the living God; but the sons of men rule over all creatures.

The Sun first complained to God, against the creatures, and the sons of men, and said: "O Lord God, mighty and all-powerful, how long wilt thou behold the iniquity and the wickedness of men: fornication, and adultery, and murder, and theft, and avarice, and oppression? All these the sons of men commit on earth. Grant me permission, O Lord, that I may take vengeance upon them, and without mercy destroy them by burning flame, and make known thy power unto them, that they may understand, that thou only art God, the Father of

Truth." And there came unto it a voice, saying: "I have heard and seen everything, and know; and nothing is concealed from me; for my eyes do behold, and my ears do hear; but my goodness and long-suffering bear with them; peradventure they may turn and repent, and their sins be forgiven. And if they do not repent and come unto me, I will judge them with a righteous judgment; and will reward every man according to his deeds."

Then also the Moon, and the whole circle of the Stars, complained unto God, and said: "O Lord God, mighty and all-powerful, thou alone knowest everything that the sons of men do: adultery, and murder, and the shedding of blood; and restrainest from them. Grant me permission, O Lord, that I may take vengeance on them as they deserve; and make known unto them thy power, that they may know that thou alone art God, the Father of Truth." And, lo, the voice of God unto them, and saying unto them: "I know all these things, and nothing is hidden from me; in my goodness and long-suffering I bear; peradventure they may repent; and if they do not turn unto me, I will judge them with a righteous judgment, and will reward every man according to his works."

How many times did the Seas and the Rivers cry unto God, and say: "O Lord God, mighty and all-powerful, the sons of men, by their works, offend against thy holy name, through their sorcery, and their fornication, and their lying, and their wicked conversations [walks], and by their going astray. Grant us permission, O Lord, that we may rise and cover the whole earth; and make known to the sons of men, that they may know, that thou alone art the mighty Lord God." And a voice came unto them, saying: "I know everything, and nothing is hidden from me; but, in my goodness and long-suffering, I bear; peradventure they may turn and repent; and if they turn not, and come unto me, I will judge them with a righteous judgment, and will reward every man according to his works."

Then also the Earth cried out to God, and said: "O Lord God, all-powerful, I am distressed more than all the creatures; I bear up under the sins of men: their adultery, and their fornication, and their murders, and their iniquity, and all the wickedness that they do, their sorcery, and their witchcraft; as father rises up against his son and slays him, and son against his father; and brother against his brother rises up, and defiles his bed; so also neighbor wrongs his neighbor. Even some of those who are called priests, and continually offer sacrifices to thy holy name—they also walk in craftiness. I therefore am more oppressed than all the creatures; therefore I am not willing to yield harvests unto them. Grant me permission, O Lord, that I may destroy their harvests, in a manner that they may

not bring forth, that they may know thy greatness, after they have been punished." And there came a voice unto it, saying: "Everything my eyes behold; and nothing is hidden from me. I bear with them in my long-suffering; and I judge them in my goodness; peradventure they may turn and their sins be forgiven. If they do not repent, and come unto me, I will judge with a righteous judgment, and reward every man according to his works."

Look on this, O ye sons of men, and see that everything which God has created has a zeal for him; but the sons of men forget him. It is not proper that we forget the long-suffering of God unto us, every day. Repent, therefore, O sons of men; for the Lord is merciful, and of tender compassion; repent of your wicked deeds, and praise God without ceasing, by night and by day. And more especially in the evening and the morning, pray on account of your sins, on account of evil temptations and snares; for every creature of God praises him always in the morning; and praise is becoming for him from every one. It is also necessary that we offer unto him good works, every one for himself.

Everything that a man does, from morning until evening, whether good or bad—the guardian angel goes forth, in mourning and sorrow on account of men, unto God—namely, he who preserves a mortal from all injuries; for in the image of God is he, wherefore the guardianship of the sons of men is committed to an angel. When the angel sees a mortal committing wickedness, the angel is afraid of him; for all the angels, guardians of the sons of men, from morning unto morning, go in before God, and everything that a mortal does is known—therefore, prayer is appointed at that time, that, peradventure, at the hour when the angel of the Lord goeth, the mortal may be engaged in prayer; and they present before him the works of man, whatever he doeth, by day and by night.

Remember, therefore, O ye sons of men, and praise God all your days; and especially, at the time when the angels worship. For first do the holy angels run, that they may reach that hour which is appointed to them for service, with their companions and friends; so also we, the sons of men. Like as the other angels, in their time, run before God, and his Spirit goeth forth to meet them, and a voice cometh to them: "Whence come my armies, and my glorious angels, the messengers of glad tidings?" and those angels of the righteous enter, and say unto him: "O Lord, now from holy men, who have come out from the world, for thy holy name, have we come: some of them dwell in caves; and others in holes of the earth; weeping, and distressed, and tormented, on account of their sins and the sins of this world; while they are hungry and thirsty, for thy name's sake; and

they have girded their loins, and hold a fast hand on good works; and cry out and say, continually: 'Our heart is ready in God;' and their mouths bless, and praise, and give thanks, at all hours, while they weep and make lamentation; and we also with them, who are their angels, we beseech thee, O Lord."

And, behold, the voice of God unto them, saying: "Know ye, therefore, O ye my angels, and my ministers, that you are here; but my grace, and my remembrance, which is my beloved Son, is with them; and he succors them in their lives, and in their death glorifies them; and will not cast them off, neither by night nor by day; for their souls are the dwelling place of my beloved Son."

And when those angels of the righteous departed, behold other angels came to worship, at the proper hour; and the Spirit of God went forth to meet them; and, lo, the voice of God unto them, saying: "Whither do ye come, and laden always with the faults and sins of the sons of men, tidings not agreeable?" And those angels answered and said: "O Lord, we have come from among the sons of men, those on whom thy name is called; and in the flood of the world they have made for themselves habitations of devils; and are in the delirium and the erring of wicked devils, in all their works; and a single pure prayer before thee, from all their hearts, they have not prayed. Further, why, O Lord, shall we pray? and why is it needful for us to do service any more, for these sinful sons of men?" And, behold, the voice of God unto them, saying: "Cease not from their service; peradventure they may repent; and if they do not repent and come unto me, I will judge them with a righteous judgment."

Again, after these things, I saw one of the spiritual ones coming unto me, and he caught me, by the Holy Ghost, and carried me to the third heaven; and the angel answered and said unto me: "Follow me, Paul, that I may show unto thee the place of the saints, that thou mayest know whither they go, when they depart from the world. Then I will carry thee to the abyss beneath, and show thee the souls of sinners, where they dwell, after the resurrection; that thou mayest know, O Paul, what will be their reward." And I followed the angel, who made known to me all these things; and he carried me above; and I looked upon the firmament of heaven; and I saw that there were there principalities who had been in the world; and there were there spirits of deception, who lead astray the heart of the sons of men from God; and there are the evil spirits of accusation, and fornication, and the love of money, and all those things in which they walked; and, behold, they are gathered for witness; even all the evil spirits that are under heaven.

And I saw there angels in whom there is no mercy; and their

faces were full of wrath; every tooth they had protruded from their mouths, and their eyes sparkled like lightning; and the hair of their heads was thick, and very strong; and as it were a flame of fire proceeded from their mouths. And I inquired of the angel who was with me, and said: "What are these, my Lord?" and he said to me: "These are angels in whom there is no mercy, who are sent after the souls of sinners and the wicked, after those who had not repentance before they departed out of the world; who did not believe our God, nor wait for his salvation, that there might be unto them a Helper."

And again, I saw above, on high, other angels, whose faces shone like the sun, and they had bound their loins with girdles, in the likeness of gold and pearls; and they held in their hands crowns; and the seal of God was upon them; and they were clothed with garments; and the name of the living God was stamped upon them; and they were united in humility and love. And I inquired of the angel who was with me: "What are these, my Lord?" and he said: "These are angels of righteousness, who are sent after the souls of the righteous." And I said to the angel who was with me: "Is this the way of every man unto God?" and he said: "Yes." And again he said unto me: "As for the righteous, when they depart from the world, these angels come unto them, and are their helpers. They have no fright, and do not fear, when these go forth to meet them; and they carry them before the throne of God." Then I said to the angel who was conversing with me: "O my Lord, wilt thou not grant to me an opportunity that I may see the souls of the righteous, how they depart out of the world?" and he said: "Come thou, Paul, and I will show thee as I have said." Then I looked, and I saw all the earth, and the creatures upon it; and they appeared as nothing, and did not exist. And I said: "Is this the creation? and are these men, and the abundance of the world?" and the angel said unto me: "These are sinners, who sin from morning until evening." Then I saw as it were a dark cloud, spread over all the world; and I said to the angel who was with me: "What is this, O my Lord?" and he said unto me: "This is the iniquity mixed with the prayer of the sons of men; who, when they pray, in their heart ponder evil; and the light of their prayer becomes darkness." And I, Paul, groaned, and I wept. Then I said unto him: "O my Lord, wilt thou not grant that I may see in what manner the souls of the righteous and of the wicked depart out of this world?" and he said unto me: "Paul, look down, and see the thing which thou requestest." And I looked, and saw, and beheld one of the sons of men fallen nigh unto death. And the angel said unto me: "This is a just one, and righteous in all his works." And I saw every thing which he did for God standing before

him, in the hour of his departure from the world. Then I Paul perceived that he was righteous who was now dying: and he found for himself rest, even before dying. And there approached him wicked angels (when a righteous one departs, they do not find a place by him), and those good angels ruled over that righteous one. And they drew out of him the soul, while alluring it with rest; and again they restored it to him, while inviting it and saying: "O soul, be assured, as for this thy body, O holy one, thou wilt return into it, in the resurrection; and thou wilt receive the promises of the living God with all the saints." Then that soul was carried from the body; and they inquired after its health, as though it had grown up with them; and they took delight with it in love; and they said unto it: "Blessed art thou, O happy soul, which, every day, didst perform the will of God; and now takest delight in pleasures." And there came to meet it he who was its guardian in its life, and said to it: "O soul of mine, be of good courage, and be joyful, and I will rejoice over thee, that thou hast done the will of our Lord, all the days of thy life; and I carried thy good works, by day and by night, before God." And again I turned, and said to my soul: "Do not fear, in that, behold, thou seest a place thou hast never seen." And while I was beholding these things, that spirit was lifted up from the earth, that it might ascend to heaven. And there went out to meet it wicked powers, those that are under heaven. And there reached it the spirit of error, and said: "Whither dost thou presume, O soul? and art thou running that thou mayest enter heaven? Stop, that we may see; perhaps there is in thee something that belongs to us, that we may narrate a little." And that soul was bound there; and there was a fight between the good angels and the evil angels. And when that spirit of deception saw, it bewailed with a loud voice, and said: "Wo unto thee, O soul, that we have found in thee nothing of ours! and lo, all the angels and the spirits are helping thee against us; and behold, these all are with thee; thou hast passed out from us." And there went forth another spirit, the spirit of the Tempter, and the spirit of fornication; and they came to meet it; and when they saw it, they wept over it, and said: "How has this soul escaped from us! It did the will of God on earth, and behold, the angels help it and pass it, and pass it along from us." And all the principalities and evil spirits came to meet it, even unto it; and they did not find in it any thing that was from them; and they were not able to do anything to it; and they gnashed their teeth upon that soul, and said: "How hast thou escaped from us?" And the angel which conducted it in life answered and said unto them: "Return, O ye mortified ones; ye have no way of access to it; with many artifices ye enticed, when it was on earth, and it did not listen to you."

And after this, I heard the voice of myriads of angels, praising God and saying: "Rejoice and be glad, O soul; be strengthened, and do not fear." And they marvelled much at the soul, when they saw it holding the seal of the living God in its hand. And thus they were giving it heart, and saying: "We all rejoice over thee, that thou hast done the will of thy Lord." And they carried it and placed it before the throne of the living God, while they all rejoiced with it. And there was a great cessation; afterwards, silence reigned for a considerable time. And afterwards, the angels ceased—to wit, those angels that worshipped before the footstool of God with that soul. And there began the angel, who was the guide of that soul, and said: "O Lord God, merciful and compassionate, remember this soul, and do not forget it; and do unto it according to the abundance of thy mercy, and according to thy right judgments." And a voice was heard, saying: "He is just."

And the spirit of the Lord, the same which guided it in life, said: "I am that spirit of life that dwelt in it; and I found to myself rest. Do unto it, O Lord, according to thy right judgments." And a voice was heard, saying: "As that did not distress thee, we will not distress that; and as it showed mercy, we also will show unto it mercy." And they committed it to Michael, the chief of the angels, the same who stands at the door of life; and he commanded it [the spirit] that it should carry it [the soul] to Paradise, to remain until the day on which it shall return to its body, in the resurrection; and it shall take delight with its body, in that everlasting bliss and delight with the saints.

And after this, I heard a voice, saying: "Righteous art thou, O Lord, and very right thy judgments; and with thee there is no partiality." This was the voice of the myriads of the adoring Cherubim, and the holy Seraphim.

And I saw twenty-nine aged ones, who were adoring, and praising, and saying: "Thou art righteous, O Lord, and very right are thy judgments; and there is not with thee partiality; and thou rewardest every man according to his works."

And the angel who was with me answered and said: "Dost thou know, Paul? every man who doeth good findeth for himself rest when he goeth out from the world; and every thing excellent and good is rewarded."

And the angel said: "Look down, Paul, and see;" and I looked down and saw; and behold, another soul departing from the body. And I said unto him: "O my Lord, whose soul is this?" and he said unto me: "Know thou that this man was wicked; and he provoked God by day and by night, while he said: 'There is nothing else for us in the world, except that we eat and drink, with the young; for who has gone down to hell

and come back? or told us that there is a judgment?" And I saw that bitter hour; and I saw all his wickedness coming before him and after him, while it encompassed him before his eyes; and I saw that hour embittered to him from the judgment that was to come. And that man was saying: "O that I had not been born, nor brought forth in the world!" And I saw that the good angels descended to meet him: and they looked upon him, and saw darkness encompassing him round about, and the foul odor of his evil deeds, so that they could not come nigh unto him; and there came also those evil angels. When that soul saw both parties, it was shaken. And those good angels saw that it had not one good work; and when they fled away from it, those evil angels took the rule over it, and pulled it out in severe anger and haste. And when it went out, they turned it back three times, saying unto it: "Look, O miserable soul, upon thy body, and think of thy house; as for that from which thou departest, again wilt thou return unto it, in the day of the resurrection, and thou wilt be recompensed, all that is proper, for thy wickedness."

And when they pulled it out, that daring one groaned in bitterness; and the angel who had conducted it in life ran before it, saying unto it: "O miserable soul, I am thy angel that carried thy sins, day and night, before God. How often did I say unto thee: 'Do not despise the commandments of thy Lord.' If I had power over myself, I would not do service for thee; no, not one hour in a day: but I have not power over myself: for he who created thee in his image and his likeness, he commanded us that we should do service for you; for God himself in kindness waited, that, peradventure, ye would turn and not perish. Come, O soul; thou didst not awake in regard to the righteous judge, Him who casts not aside any man; but every one is rewarded according to his work. Know thou, O soul, that from this time onward I will be a stranger unto thee." And that miserable soul was made ashamed; and its own angel distressed it. And when it arrived at the door of the firmament, that soul saw hosts of the Wicked One; and it beheld those hosts that they placed a weight on its weariness—error and accusation, and the spirit of deceiving. And when they came unto it, they said: "O soul, whither wilt thou flee? O miserable soul, stop, that we may see if there is any thing of ours." And when they saw it, they rejoiced and said: "Yes, yes, there is in thee, and thou art altogether ours; now we know that even thine angel can not help thee and save thee out of our hand." And the angel answered and said: "Know ye that it is a soul of the Lord, and he will not cast it aside; neither will I surrender the image of God into the hand of the Wicked One. The Lord supported me, all the days of the life

of this soul, and he can support me and help me, and I will not cast it off until it go up before the throne of God on high. When he shall see it, he hath power over it, and will send it whither he pleases."

And when these things took place, behold, a voice was heard from heaven, saying thus: "Bring up that soul, which despised the word of the living God." And when it entered heaven, the ranks of angels saw it; they all exclaimed, with one voice, and said: "Wo unto thee, O miserable soul! what answer hast thou for thy works? or how wilt thou render to the living God an answer for thine iniquity? Wo unto thee! when the angels worship him, what will be thy answer unto him who poured out upon thee his mercies—upon thee, by night and by day!"

And the angel of that soul answered and said: "All ye, my friends, ask, pray, and beseech God, that this soul may be taken from us, and from our midst; for, lo, we are tormented by the stench of its odor. For ye perceive that from the time it came in among us, the odor of its stench hath passed upon all of us." And those angels, who were with the angel of that soul, made supplication; and afterward it ascended to heaven. Then they brought it before the throne of God; and it worshipped before him. And the angel stood in fear before God, and saying: "O Lord God, merciful and compassionate, the just judge; thou, O Lord, knowest this miserable soul; I am its angel, who performed for it service. I have been greatly distressed by the side of it. Do unto it, O Lord, according to thy mercies, and thy just judgments."

Thus also said the Spirit of God: "I am the Spirit of Life, who have been with it and dwelt in it. I found in it no rest. Thou knowest, O Lord, that it hath afflicted me, and distressed me; and not in the least hath it remembered thy commandments, O Lord, even for one hour. Do unto it, O Lord, according to thy just judgments."

And lo! a voice, saying: "Where are thy fruits that I gave unto thee, that thou shouldst eat and take pleasure? Have I placed a difference between thee and the righteous? Have I not caused the sun to rise on them and on thee?" And its mouth was stopped, and it had no answer. Then I heard another voice, saying: "Just, O Lord, and right are thy judgments; and there is in them no partiality; for as for every one who hath practised mercy, the mercy he hath practised will be shown unto him in the day of judgment." And afterward, there went forth a command against that miserable soul, that it should be delivered unto the angel which was stationed over torment, and that he should carry it unto outer darkness; that it might be tormented there, until it return to its house, in the resur-

rection; and then, it and its body should receive torment together, as they sinned here.

Again, I heard a voice which said: "Righteous art thou, O Lord, and very right are thy judgments." And when they brought that soul, it wept and said: "O God, merciful, and just, and righteous, and right, in all thy works; there are seven days since I departed from my body; and I have been delivered to angels, and they have carried me to dreadful places, and there tormented me, these days." And a voice came unto it, saying: "If thou hadst practised mercy, mercy would have been unto thee. On this account, the day thou wast carried off, there was no mercy for thee." And that miserable soul said: "I have not sinned, O Lord!" Then anger burned against that soul; and the just judge went forth and said: "O angel of this soul, come and make known all its works." And he stood in great fear; and the angel held in his hand the like of a writing, and said: "Behold the sins of this soul in my hand, from the day it was fourteen years old until this day." And behold, a voice, saying: "Unto thee I say, O miserable soul, if thou hadst repented, before thy death, I would not have remembered even one of thy sins: if thou hadst repented three months, or three days, before now, I would not have remembered even one of thy sins; and now I swear by my angels, and by the strength of my arm, if one hour before thy death thou hadst repented, I would have received thee. But order that the angel of such and such a soul come, and bring hither the souls with them." And in the same hour [immediately] they stood before God; and that soul recognized those souls against whom it had sinned. And lo, a voice, saying: "Lofty and fearful one, behold thy servants standing before thy majesty." Then that soul said: "This soul hath not ceased, and sleep hath not entered its eyes, until it killed that soul; and it shed blood upon the earth; and with another soul it committed adultery, and then it committed the sin of abortion upon it."

Then said the judge: "Thou knowest, O miserable soul, that, as for every one who committeth wrong on a companion, if he dies first, I keep him until his murderer, and his enemy, come; then they will stand before the just judge; and every man will be rewarded according to his works." And God commanded that that soul be committed to the hand of the angel for the lowest Tartaros, and there be tormented until the resurrection.

And when these things took place, I heard a voice, saying: "Just and right is the judgment of God;" and again was there another voice of myriads of angels, praising God, and saying: "Righteous art thou, O Lord; and very right are thy judgments; and there is no partiality with thee."

Then said unto me the angel who was with me: "Dost thou

see all these, Paul?" and I said unto him: "I see, O my Lord." And he said unto me: "Follow me, and I will show thee the place of the righteous." And I followed the angel, and he took me, and caused me to fly, and carried me up to the third heaven. Then he placed me at a door; and I looked upon the door, and saw the likeness of fine gold; and before it, two posts, like adamant; and two tablets of gold above them; and they were full of writings. And the angel who was with me turned and said unto me: "Do not fear, Paul, to enter this door; for every man is not permitted—only those in whom there is great purity, and in whom evil dwells not." And I inquired of the angel who was with me, and said unto him: "Why are these writings inscribed on those tablets?" and he answered and said unto me: "These are the names of the righteous, as our Lord said to his disciples: 'Rejoice not that devils are subject unto you, but rejoice that your names are written in heaven.' These are they who praise God with all their hearts, and on earth are sojourners." I inquired of him: "O my Lord, are their names written while they are on earth?" and he answered and said unto me: "Yes; not only are their names written, but their works from day to day: the angel, their minister, brings tidings of their works, every day, from morning to morning; they are known to God by their hearts and their works. And after they are recorded, if there happen to them a matter of sin, or deficiency, it is purified by chastisement, according to their sin; that there be not unto them any defect in their strivings. They are known through the angel who performed for them service before they had departed from the world."

And when we entered within through the gate into the city, there came forth an angel unto us, whose face was shining like the sun; and he embraced me, and kissed me, and said: "Peace be unto thee, O beloved of our Lord;" and he manifested unto me a face of love. Then he groaned, and was sad and wept; and I said: "O my Lord, why weepest thou?" and he groaned, and said unto me: "Yes, master, to weep is needful for me, and to be sad, about the race of the sons of men; for many and great are the good things and blessings which God has made ready for them; and so great also are the promises which he desires to grant them; but they cut themselves off, and know not, and keep not the commandments of our Lord; and all of them are not worthy of those boons and blessings."

And I said to the angel who was with me: "Who is this, master?" "This is Enoch, the scribe of righteousness." Then I entered within that place; and I beheld there great Elijah, coming toward us; and he drew near and gave me a salutation, rejoicing and delighted. Then he turned and wept; and he said unto me: "Art thou Paul? Thou shalt receive the reward

of thy toils and thy teachings which thou hast done laboriously for mankind, and turned them unto life. Behold, O my son, Paul, how great are the promises of God and his blessings! a few only of men deserve them, a very few of mankind; for few are they who enter these places which thou beholdest."

And the angel who was with me answered and said unto me: "Whatever I show thee in this place, reveal not on earth unto the sons of men; for flesh and blood understand not the life which is after the resurrection; but after the resurrection they shall know." And I saw there things unutterable by a tongue of flesh. And I looked upon that land, and I saw that there was in it a river of water, and it had on its margins trees planted, on this side and on that side; and every one brings forth fruits, once every month; and these fruits are formed in all likenesses. And I saw there, in the east of that place, that it is the most desirable of all the creations of the living God; and that land was very light; and in it were trees of life; and they were full of fruit, from their root to their top.

And the angel who was with me answered and said unto me: "See these, O my son; God hath made ready these for those who are worthy of them." And again he said unto me: "These are the promises which God hath promised to his saints, and know thou that there are seven times more than these—those which eye hath not seen nor ear heard; nor into the heart of a mortal have they entered. And behold, I say unto thee, Paul, concerning the holy men who have departed out of the world, and have seen these promises, which God hath made ready, that those same groaned and said: 'Why did such a word escape from our mouth?' and they were meditating on some small word, why they had uttered it." And I saw men there rejoicing, and exalting and praising the Creator; and I inquired of him: "Who are these, master?" and he said unto me: "These were men who were married in the world, and preserved their union, as God said unto them; and kept his commandments; and their bed was pure; and, behold, they have delight, and rejoice forever and ever. But as for virgins, and those who were persecuted from the world, and hungered and thirsted for righteousness, God shall give unto them blessings more than these, O son. And behold, I show unto thee, O Paul."

And after these things, he carried me to the eastward of that place; and I saw there a river of water; and its waters were white, more so than milk; and he said unto me: "Dost thou see these, Paul?" and I said to the angel: "What are these, O my Lord?" and he said to me: "This is the sea of the Eucharista [oblation]. To the east of this sea is the city of Christ; and not every man is permitted to enter that city—that is the way with the men who have committed adultery and wickedness,

and kept not his commandments; they will not enter into it. But if a man turn from them, and repent of his iniquity before his death, just when he departs from earth, the angels bring him, and he worships before the throne of God, and he has the mark of repentance. And he is committed unto Michael, the chief of the angels, who conducts him over this sea of Eucharista, and introduces him to the city of Christ, and he is joined with those who sinned not." And I gave praise for what I saw.

And the angel who was with me answered and said unto me: "Come with me, and I will introduce thee into the city." And while I was standing by that sea of joy, he brought me unto a ship; and he placed me in it; and it resembled pure gold. And I saw a multitude of angels, more than three thousand, praising, and singing, and raising hallelujahs before me, until I arrived at the city of Christ. And those who dwell in it, when they saw me, rejoiced with great joy, and came out unto me, and escorted me in. And when I went within that city, there was there a great river; and that city was light, seven times more than the sun; and it had seven walls round about it, and twelve thousand strong towers within it; and between them, every one was a furlong; and I said to the angel who was with me: "What are these, O my Lord?" and he said unto me: "These are the towers which separate between the sons of men."

And when I beheld, I wondered, and was astonished at the glory of that country. Afterwards, I saw the gates open, in that part, and adorned with every thing comely. And there were four rivers round about it: one on the east, and one on the west, and one on the north, and one on the south; and I said unto the angel who was with me: "What are these rivers, O my Lord?" and he said unto me: "These four rivers are the likeness of those which are on earth: Gihon, and Pison, and Euphrates, and Tigris."

And I saw within the gates of that city great trees, which were very high: they had no fruits, but only leaves; and I saw a few men dwelling in the midst of those trees, who wept very much, whenever a just man entered into the city; and they themselves were bowed down and tormented; and when I saw them, I wept, and said unto the angel who was with me: "Who are these, who were not worthy to enter into the city?" and the angel said unto me: "It is more suitable for us to weep for these than for any men;" and I answered and said: "Wherefore, my Lord?" and the angel said unto me: "These were mourners and fasters, and they were occupied in prayer; but their heart was lofty before God, and they could not offer even one homage. Their heart was strong, and they supposed their business was going on well: they had not heard that God is op-

posed to the lofty, and giveth grace to the humble. And know thou, O Paul, that, more than all men, they praised themselves; and they gave to no man any salutation. To whom they pleased, they opened the door; but him to whom, for God's sake, it was necessary to open, on account of his being a stranger, they buffeted. This their high-mindedness hath prevented their entering in here. The Lord of glory, who was reviled by a cruel people, how did he bear all this, for the sake of the touching of one sheep, that it might not perish! They knew how they ought to do—I declare unto thee, Paul, that these have taken more pains than all the saints; but their loftiness was not bowed. This is the cause that prevented them from entering within."

After I passed from thence, I was going along with the angel; and he carried me up over a river; and I saw there the prophet Isaiah; and with him, Jeremiah; and Ezekiel, and Moses, and all the line of the prophets; they rose and inquired after my health; and I said to the angel who was with me: "What place is this?" and he answered and said unto me: "This is the place of the prophets, and of those who distressed their souls for God. When these depart from the world, they are carried to worship before God; then they are committed to Michael, the chief of the angels; and they are introduced into the city of the prophets; and these inquire after their health, as of brethren; and they love them, because they have done the will of God; and they are all in the same enjoyment."

Then he carried me to the south of the city, and I saw there infants—those whom Herod killed; and they also rose and inquired after my health. And the angel who was with me answered and said unto me: "Whoever has kept his virgin, and the purity of his soul, he, when he departeth from the world, worships before the throne of God; and he is committed to Michael, the chief of the angels, who brings him to these infants, and they inquire after his health, as of a father."

Then he brought me to the east of the city, and I saw there honorable old men; and the just patriarchs, Abraham, and Isaac, and Jacob; and the whole bands of righteous ones: and they inquired after my health with joy; and I said to the angel who was with me: "Who are these, O my Lord?" and he answered and said unto me: "Every one who loveth strangers, and showeth mercy unto the sons of men, when he departs from the world, and worships before God, by this road he goes in unto these saints, and is joined with them in this city; and they inquire after his health; and also love him, because he loved strangers like them; and they introduce him into the promised land."

And he brought me to the north of the city; and I saw there

sons of men who were rejoicing, and exulting, and taking delight; and I said to the angel who was with me: "Who are these, my Lord?" and he said: "These are they, who devoted themselves unto God with all their heart, and entered this place without fear."

And again he brought me to the midst of the city; and there were within it twelve walls which were very high; and I inquired of the angel who was with me, and said: "O my Lord, is there yet any other place more than [superior to] these?" and he said unto me: "Each one is more glorious than the other, from the first even unto the twelfth. All men, according to their works, are cut off by one of these walls; and every one, according to his evil deeds, is cut off, by these walls, from one even unto twelve, from the sight of God."

Again he brought me to the middle of the city, and I saw thrones overspread, and robes and crowns placed over them, such that a man can not narrate the excess of their beauty; and I said to the angel who was with me: "For whom are these, my Lord?" and he said: "For those who in simplicity are reconciled with God, and who said in regard to themselves: 'We are low and despised;' and accounted not themselves any thing. ~~Now~~ they have the things thou beholdest. These did not know books, nor any other thing; but daily they gave peace to [saluted] each other for the love of Christ. Some learned ones, how do they talk in their boasting! thou beholdest these ignorant ones, who did not know any thing, how they were worthy of all this glory."

And I saw in the centre of the city a great altar, which was very high; and I saw standing on the side of the altar an aged man, great and honored; and his face shone as the sun in the firmament; and he held in his hand a harp, and said: "Hallelujah;" and the whole city was astonished at his voice; and together they shouted—those that were above the towers, and all said: "Hallelujah." And when I saw these things, the foundations of the city were shaken with their shouting. Then I inquired of the angel who was with me: "What is this voice which shakes the city and all its inhabitants?" and the angel said unto me: "This is David, the king and prophet, who sings in the Jerusalem of Christ. As he sang on earth, so sings here David, in spirit, and all the saints are engaged with him, with the voice of shouting; and David the prophet goes forth singing, first, while all the saints after him respond: "Hallelujah."

And I said to the angel who was with me: "Why does David sing before this altar, and these saints respond, each in his own place?" and the angel answered and said unto me: "When Christ, the Son of God, ascended on high, and sat down on the right hand of his Father, this David sang alone, before his as-

cension, and said thus: 'Lift up your heads, O ye gates; and be ye lifted up, ye everlasting doors, that the king of glory may come in.' Many men longed for the singing of that time; but, save that man, none reached it. Again, a man hath not permission on earth to offer up sacrifice [celebrate the sacrament] without offering praise in it, with the songs of the blessed David. Without the praise of David, a man presumes not to offer: it is necessary that he sing his songs, at the time of offering; for it is the body of Christ."

And I said to him: "O my Lord, what is the meaning of Hallelujah?" and he said unto me: "How much thou examinest, and askest questions, Paul! Whatever thou desirest to know, know. Hallelujah, in the language of the Hebrews, means 'Praise the Lord.' Praise God, who was the first of all. Unto him do the angels, without ceasing, raise Hallelujah, and praise him who sent for us salvation, and created for us all things."

And I said unto him: "O my Lord, then every one who says 'Hallelujah' praises God;" and the angel said unto me: "If a man sing in the assembly, and those who are near him do not respond 'Hallelujah,' they sin. If those men do not respond, the angels will certainly respond; and if a man is sick or *weak*, and does not respond, the guardian angel responds in his stead. But I declare that every one who is strong, and doth not respond—what do they say of him? 'This proud devil turneth aside; if he despises one response, does he not know that he despises to offer up an offering to God? he does not prize converse with God; for as much as a man offers prayers, he speaks with God; and he who prays not cuts himself off from converse with God.'"

After these things, he led me out without the city, and brought me to the midst of those trees of the Eucharista, and the angel said unto me: "This is the land of promise; it is all the delight of the saints."

Then he lifted me up, and carried me above the rivers of the sea, and raised me above the sea of the Ocean, which sustains the firmament of the lower heaven; and the angel answered and said unto me: "Dost thou know whither thou art going, Paul?" and I said: "I do not know, my Lord;" and he said: "Follow me, and I will show thee the place in which the souls of sinners and wicked ones are tormented."

And he brought me toward the setting of the sun; and I saw there the end of heaven, made firm on a great river; and I asked him: "Which lower deep is this, my Lord?" and he said unto me: "This is the sea of the Ocean which surrounds the whole earth, and the earth is within it."

And I saw there coals of fire placed in order, and a flame of fire proceeding from them; and many men are sunk in it; some

of them up to the belly, and some to the lips, and some to the head—and they in the fire; and I inquired of the angel: “What are these, my Lord?” and he said: “These made [reckoned] themselves not on a level with the righteous, and not with the wicked: they did not receive [experience] repentance, but filled up their life in error, and in serving their body, and did every thing in fornication and great sins. They never gave themselves to repentance, and remembered not their end; and when they died, they came here.” And I said to the angel who was with me: “Who are those who sink to their knees in the fire?” and he said unto me: “These, when they go out of the church, and have finished prayer, speak idle words, and desire that men should listen unto them; and they raise their voice above their companions.”

Then I said to him: “Who are these that sink to their belly in the fire?” and he answered and said unto me: “These, when they partook of the body of our Lord, would commit adultery and fornication; and kept not their body for the honor of their Lord; and restrained not themselves from wantonness until they died. And those who sink up to the lips are those who sang in the church at all times, and incited each other; but by tricks and by dissembled love they deceived their companions.”

Afterwards I saw there, at the setting of the sun, many torments, of various kinds, and full of men and women; and a river of fire flowed forth from among them; and they suffered bitter torments.

And I saw there deep abysses, and in them many souls fallen upon each other. The depth of that river was thirty cubits and more. And they wept and groaned, while they said, all together: “Lord! have mercy upon us, O Lord God!” and yet there was no mercy upon them.

And I inquired of the angel who was with me: “Who are these?” and he answered and said unto me: “These are they who hoped in God, that he might be a helper; but they were at rest on their wealth.” And I inquired: “O my Lord, from what time are they here?” and he said unto me: “From ten ages; and still longer will they remain here, age upon age, in this torment. And this abyss has no measure; and it boils more than a caldron, as you behold.”

Then I looked, and saw, and behold, another deep, which was deeper than the first; and there were in it souls of the wicked. It was so deep that, when souls were cast into it, they would hardly reach the bottom of that deep in a hundred years.

And I Paul, when I saw these things, wept over the human kind, that there was so much torment for them. And the angel answered and said unto me: “Wherefore dost thou weep? why art thou more merciful than God?” and I said: “God forbid,

O my Lord; for God is good, and long-suffering unto the sons of men; and he leaves every one of them to his own will; and he [man] walks as he pleases."

And I looked again, and saw a river, which was more terrific [sharper] than the other river. And the angels were bearing off an old man, and they sunk him in the river up to the knees. And there came a minister from the angels, and he held in his hand an iron pitch-fork, and it had three tines, and they were extracting the entrails of that old man from the mouth. Then I said to the angel who was with me: "What are these torments, with which they are tormenting this one? and how bitter they are!" and the angel said unto me: "This was a priest; and he did not fulfil his ministry as he ought. He ceased not from committing adultery every day. He ate, and drank, and committed fornication; and the rule of his office he did not fulfil—no, not for a single day."

Again I looked, and saw another old man, whom four angels were carrying off in a severe manner, and at a rapid run, and they sunk him up to the knees in that river of fire; and they allowed him not to say: "Lord, have mercy upon me;" but tormented him with rigor. And I said to the angel who was with me: "Who is this, O my Lord?" and he said unto me, "~~O~~ my son, this was a bishop; and he did not pasture well his flock; but made for himself a name in eating, and drinking, and pleasures; and he remembered not the grace by which I set him over it, and accounted him worthy of the great work, that he should be a shepherd; and he did not judge one righteous judgment; nor had he mercy on the orphans and the widows."

And I saw there another man, sunk up to his chin; and he wallowed in blood; and worms were coming out of his mouth; and he was weeping in bitterness; and he was crying out and saying: "O Lord, have mercy upon me;" and this torment was more severe than all the other torments. And I said to the angel who was with me: "Who is this, my Lord?" And he said unto me: "This was a deacon; and he was wont to eat the sacrament, not according to rule, but with the gluttony of bread; and he did nothing good before God, a single day, but committed adultery. Therefore they show no mercy unto him; and his torments also are without mercy."

Again, I saw a man in severe distress; and they cast him into the river of fire. And there came to him an angel, one who presided over the torments; and he held in his hand pincers of fire, very sharp; and he was cutting off the lips of that man, little by little. And when I beheld, I Paul wept; and I said unto the angel who was with me: "What has this one done?" and he said unto me: "This one was a reader and a teacher in -

the world; but he would not himself keep one of the words which he taught; and he died, and had not repented. For this reason they torment him."

Again, I saw another place in which there was devouring fire, and a worm; and many men and women were cast into it; and that worm was gnawing and devouring without mercy. And I said to the angel: "Who are these, my Lord?" and he said unto me: "Dost thou see, Paul? These are those who took usury, and placed their hope in their riches, and trusted not in the Lord, that he should be unto them a savior; and they died without repentance, and came to this dreadful and bitter torment."

And again he showed unto me a very distressing [narrow] place, and more severe than the former one; for there were there men and women gnawing their tongues. And I said unto the angel who was with me: "Who are these, my Lord;" and he said: "These are they who whispered together in church, in the time of the service of the holy ordinances, and listened not to the words of God, but talked idle words; and who forsook the converse with God; and they died without repentance."

And again, I saw another deep, from which issue forth ~~torments~~; and I saw in it men and women, tormented without mercy; some of them up to their lips, and some up to [the top of] their head. And I said to the angel: "What are these?" and he said unto me: "These are witches and wizards, who ceased not from their sorceries, till they departed out of the world." And I saw again, over on the other side of them, bitter darkness, and there were in it men whose cry rose up unceasingly; and they were crying out and saying: "O Lord, have mercy on us, for now we have known the time of repentance." And those angels yet the more tormented them, saying: "There is no place for repentance. Had you repented before death, you might perhaps have been accepted." And I, Paul, groaned and wept; and I said: "Wo unto you, O wicked ones! wherefore were you born into the world?" And he answered and said unto me: "It is more needful to weep for the patriarchs, and the metropolitans, and the bishops; and weep thou over priests, and over deacons; for they have all done iniquity; and yet more, over lovers of money. They loved the torments into which they have fallen, and showed no mercy; and to them also no mercy comes, but they are tormented seven-fold; for they have lost the time of repentance. But God is merciful, who hath left every man to his own will; and they therefore deserve bitter torments."

And when I was weeping over these things, the angel said unto me: "Art thou crazy, Paul? As yet, thou hast not seen bitter torments." Then he carried me to the west, where all

the torments were made ready; and he stationed me upon a well; and I saw that the well was sealed with three seals. And the angel who was with me answered and said unto me: "Paul, dost thou see this well?" Then he said to the angel who stood over the mouth of the well: "Open this well for Paul, beloved of our Lord; for our Lord hath given unto him permission that he should see both all the enjoyments and blessings of the righteous, and all the woes and torments of sinners." Then the angel answered and said unto us: "Then stand afar off, that the odor of the stench may not reach thee." And when he opened the well, there came forth from it the odor of much stench. And the angel who was with me said unto me, that as for every one who is cast into this well, there will be no remembrance of him, neither with God, nor with angels. And I said to the angel who was with me: "My Lord, who are these, that deserve this pit?" and he said unto me: "Those who do not confess Jesus Christ, nor his resurrection, nor his humanity; but consider him as all mortals [earthly ones]; and who say that the sacrament of the body of our Lord is bread."

Then I looked to the west, and behold, heaven opened; and Michael, the chief of the angels, he who is over the covenant, descending from heaven, and a host of angels with him, and he came unto those who were in torments. They said unto him: "Have mercy on us; we know that thou didst always offer up supplication in our behalf, while we were in the world; and now the fearful judgment of God hath reached us." And the angel answered and said unto them: "Hearken, all ye who are in torments; by that Lord before whom I stand, I do not cease to weep on your account. Yet ye, O wicked ones, would not cease to sin; and ye filled up your life with vanity; and now, O ye wicked ones, where are your prayers, and where your repentance, that peradventure there should be unto you mercy?" And I, Paul, heard these things from Michael; and those wicked ones were weeping and crying, and their voice was like thunder. And I remembered the words which our Lord spake: "There shall be weeping and gnashing of teeth." And the angels with me were crying out and saying: "O our Lord, have mercy on the work of thy hand [thy forming]; have mercy on ~~thy~~ ^{mine} image."

And when these things took place, I, Paul, stood confounded; and I saw the heavens shaking, like trees before the wind. And the gates were opened; and I saw our Lord coming with an escort on the clouds of heaven; and the odor of incense went forth before him, from the earth even unto his throne. And I saw twenty-four elders casting themselves down before God and making supplication. And the four winds of heaven worshipped and made supplication before God. And all the angels

were crying out and speaking with them. And I heard the voice of our Lord saying: "What do my glorious angels desire?" and the angels answered and said: "Plenitude of thy mercy unto the sons of men." Then all those who were in the torments lifted up their voice and said: "O Lord Jesus Christ, son of the living God, have mercy on the work of thy hands [thy forming, or moulding, as a potter]."

And I saw a throne, and before it were prophets, and, behind them, apostles, and martyrs, and confessors; and every one of them in his order. And while I, Paul, was astonished at all this, I saw an old man standing by me; and he was beautiful in appearance; and an angel singing before him. And I inquired of the angel who was with me: "Who is this?" and he said unto me: "This is Moses, the founder of the divine laws." And he drew nigh unto me, and inquired after my health; and he was weeping. And I said unto him: "Wherefore weepest thou, master?" and he said: "I weep for the thing that I have planted in the world, and it hath not brought forth fruit; and all the great miracles which God wrought by my hands, they understood not; and they forsook not the worship of idols; and Israel turned not unto the Lord. I declare unto thee, O Paul, ~~that in~~ the hour the cruel ones crucified the Son of God, him who gave unto them laws, at the same time, all the angels stood in sorrow; and all the righteous patriarchs did likewise; and the angels desired at once to destroy the crucifiers; but the command of the living God restrained them, that he might fulfil the words of the prophets. But the patriarchs were all looking at me, and saying unto me: 'See, the sons of thy people, what have they done to the Son of God?' Therefore I say unto thee, O Paul, blessed art thou; and blessed is the generation of which thou art a minister; and they do not know to what a boon thou dost invite them."

And while he was talking, there came unto me twelve others, saying unto me: "Art thou Paul, who was called Saul? We have heard before God a good remembrance of thee." Then I said: "Who are ye, my masters? tell me." The first one answered and said: "I am Isaiah, the distinguished prophet; and Manasseh, the son of Hezekiah, sawed me through with a wood-saw." And another answered and said: "I am Ezekiel, the son of Buzi, he whom the Jews dragged on the mountain, until the brains of my head went out. And all of us, my son, died in this way; and not one of us by a natural death. God constrained us, that we should turn Israel; and every one of us, in some way, they tormented. O Paul, blessed is the people that repents through thee; and blessed is the generation whose minister thou art." And one of them answered and said unto me: "My son, I received angels into my house, as strangers; and

the sons of the city came to take them away from me by force, for wantonness; and I gave them my two daughters, who were virgins, and said unto them: 'Do unto them as you please; lo, the two know not a man; and to these men do no wickedness;' and they listened not unto me. And lo, thou seest, Paul, that every evil-doer is thus rewarded."

And after these things I saw there, coming towards me, another old man, whose face and looks shone very brightly, like an angel; and his angel before him, singing and praising. And I said to the angel who was with me: "Then, my master, as for every one of the saints, the angel who guideth him in the world is here with him praising; and wherever he goeth, he walketh before him; and the angels and saints have a love that cannot be divided. From the day that they do the will of God, they do not separate from them; and in every place where they sojourn, the praise of the Lord is in their mouth."

Then I inquired of the angel who was with me: "Who is this old man, master?" and he said unto me: "This is righteous Job." And he drew nigh unto me, and gave me a salutation, and said unto me: "Paul, thine honor and remembrance are always with God, and among all the saints. And I am Job, who endured many temptations from Satan. Thirty years he [God] left me, until I fell, prostrated and smitten with evil boils. Worms swarmed upon me, and every one of them about three fingers [in length]. And Satan daily uttered threats over me, saying: 'Curse thy God and die.' And when he prompted my sons with me to come and comfort me, then Satan would say with their tongue: 'How much Job suffers these torments, and the plague of boils!' And every day he urged them to say to me: 'Blaspheme against the living God and die.' But I yielded not to the desire of the Wicked One, but always said: 'The Lord gave, and the Lord hath taken away; blessed be his name.' It were better for me that I should remain under the scourge with which I was so much distressed, all the days of my life, than that I should blaspheme against God. And I would not cease from blessing his name; and he was long-suffering unto me, in all that distress; for whom every thing is easy; for what is the affliction of this world, compared with the promises of God, which he has prepared for his called, and those who delight in his love?"

And I saw another old man, saying unto me: "Peace be unto thee, O Paul." And I said unto the angel who was with me: "Who is this old man, my master?" And he himself said to me: "I am Noah, of the ark of the flood. I was six hundred years old, when I was building the ark for all flesh; and I ceased not to tell the sons of men: 'Repent of your evil deeds; for behold a flood cometh, and it will destroy you.' And they

saw that I prayed, by night and day, for them: bread I ate not in quietness; and the hair of my head I shaved not; and I hoped that, peradventure, God would show mercy unto the work of his hands, and not destroy it. But they repented not, and considered not."

And after these things, I saw two coming unto me; and the angel who was with me said unto me: "These are Elijah and Elisha." And they came unto me, and inquired after my health; and Elijah said unto me, while rejoicing with me: "I prayed before God concerning the people of Israel, and it rained not upon them rain for three years and six months; for their iniquity was great. I spake unto them, and they would not hear me. And I remembered that whatever a man asks, the Lord granteth it unto him; as David, the prophet, hath said: 'The Lord is nigh unto those who call upon him in truth; and he performeth the will of them that fear him.' And often the angels asked that he would give them rain, and he gave not, until I called upon him again; then he gave unto them. But blessed art thou, O Paul, that thy generation, and those thou teachest [thy teaching], are the sons of the kingdom. And know thou, O Paul, that every man who believes through thee hath a great blessing, ~~and a~~ blessing is reserved for him." Then he departed from me.

And the angel who was with me led me forth, and said unto me: "Lo, unto thee is given this mystery and revelation; as thou pleasest, make it known unto the sons of men." And I Paul returned unto myself; and I knew all that I had seen; and in life I had not rest that I might reveal this mystery; but I wrote it, and deposited it under the ground, and the foundation of the house of a certain faithful man, with whom I used to be, in Tarsus, a city of Cilicia. And when I was released from this life of time, and stood before my Lord, thus said he unto me: "Paul, have we shown all these things unto thee, that thou shouldst deposit them under the foundation of a house? Then send, and disclose, concerning this Revelation, that men may read it, and turn to the way of truth, that they also may not come to these bitter torments."

And thus was this Revelation discovered. When this Paul, the apostle, was in Tarsus, a city of Cilicia, in the house of an honorable man, the angel of the Lord appeared in a dream unto that man, and said unto him: "Destroy the foundation of this house, and the thing thou findest, take." And the man did not understand; he thought that it was a lying dream, and paid no attention. And again, he returned to him the second time, and urged him, saying: "I say unto thee, O man, pull down all the foundation of this house, and see everything that thou findest in it; take it and make it known unto the sons of men, that they may turn from the evil way unto life." Then that man arose in

wrath, and pulled down the building, and dug up the foundation; and found a box of white glass; and in it was that which the spirit saw and wrote—namely, Paul, the apostle, the blessed and divine, with his stockings placed by the side of this Revelation—these stockings he used to wear on his feet at the time of prayer—and his cloak folded up, with this Revelation. When he found them, he brought them unto a judge, thinking that there was something of gold within it. And he carried it, still sealed, to king Theodosius; and that faithful and righteous king opened it, and he saw thus inscribed: “Unto you I say, O sinners, for your sake, God descended from heaven, and took a body from the Holy Ghost, and was hung upon a tree, that he might make you free from sin. And I sent unto you my just and righteous servants, that ye might turn unto the way of truth; but some of them ye killed; and some of them ye stoned, while they were preaching unto you the truth. But ye believed not all these. And I gave unto you a sacrament [mystery] for the repentance of life, and ye repented not. Now, understand and behold this Revelation; and repent of your wicked ways, and of everything which is hateful in the world. Now ye see the torments which are recorded in this Revelation; and every one who turneth not to the way of repentance, shall be thus tormented. Hitherto, ye have said: ‘We have not known.’ Now, behold, ye see everything which is recorded.”

Thus Christ gave this vision unto the great and blessed apostle Paul; who, so long as he was in the world, taught and preached; and now also, in this Revelation, He hath made known unto him that the sons of men should turn through him; after his death, by this Revelation should they be instructed.

Be astonished, O my beloved, at this man of wonders! How much he loved his Lord! And he concealed not from him even one thing of what took place; not in regard to the righteous, nor in regard to the wicked.

This is the last Testament which our Lord sent to the world* [by the hand of the father of the Gentiles, Paul the great preacher

* The remainder of the translation, enclosed within brackets, is made by Dr. A. H. Wright, missionary at Orûmiâh, at present on a visit in this country. Its text is not now found in the original manuscript (the last leaf of which has become lost or destroyed), but we possess it in a modern copy made from this at Orûmiâh, just before the work was first sent to America. The copy is a good deal defaced in places, by the dampening of the ink, and consequent adhesion of the leaves, and Dr. Wright's version is at one or two illegible points partly conjectural, although doubtless in the main accurate. We have also to thank Dr. Wright for collating with the original text the whole version of the Revelation, as it has been going through the press; and, finally, for correcting the specimen of the Syriac text which follows at the end of the article, and which includes the last paragraphs, from the account of the discovery of the work at Tarsus to the end of the part contained in the older manuscript.—*COMM. OF PUBL.*

ARTICLE V.

BRIEF NOTICE OF THE KEMĪ LANGUAGE.

SPOKEN BY A TRIBE IN ARRAKAN, FARTHER INDIA.

BY REV. LYMAN STILSON,
FORMERLY MISSIONARY OF THE AM. BAPT. MISS. UNION.

Presented to the Society May 21st, 1862.

Extract from Mr. Stilson's Letter accompanying the Article.

..... "Some twenty years ago, I first became acquainted with the Kemī people, and spent about three months with them at their jungle residences, doing what I could to gain a knowledge of their language, with the direct purpose of reducing it to writing, but having in view the ultimate object of introducing the gospel among them. They reside chiefly in the northern part of Arrakan, in which British province I spent seven years of my residence abroad.

A few words regarding the origin of my acquaintance with the Kemīs may not be without interest.

My first introduction to them occurred in December, 1841. I then resided on the island of Ramree, at a village of the same name. Rev. E. Kincaid was then living at Akyab, about 150 miles farther north. He, having received a visit from the Kemī chief, Chitsa, with a very urgent request to visit his people, and to aid them by giving them books and instruction, that they might be more nearly on a level with their Burmese neighbors, resolved to go and see them on the subject, at some convenient time. He immediately wrote to me, urging me to accompany him on a tour up the river to their residence; and as I had met with some success in obtaining a partial knowledge of the language of a kindred tribe, the Khyens, he was very desirous that I should make a trial with that of this people. I consented, and joined him in the proposed journey. As this tour is fully described by Mr. Kincaid in a memoir entitled the "Missionary Hero," I need not speak farther of it here.

Having spent some days with the chief and his people, and having become fully satisfied of the practicability of gaining, through the medium of the Burmese, a sufficient knowledge of the language to reduce it to a written form, I deemed it advisable to make the attempt.

It was therefore arranged that I should take my family with me, and spend some time at Chitsa's village. To this course I was urged by the chief, who agreed to do all he could to make our stay near him comfortable and pleasant. He offered to build immediately at his own expense a house which would be convenient while we should make our home at his place. Consequently, on the 20th of January, 1843, we found ourselves located in our quiet "mountain home," a little way from the Mee River, a branch of the Koladon, some seventy miles above its mouth at Akyab, far away from any individuals with whom we could converse with freedom, even in the Burmese language.

The house, though not finished in the style of some New York palaces, answered our purpose quite well; it had three rooms for our accommodation, and was entirely of bamboo, from the leaf-shingled roof to the basket-work floor. In this dwelling, although it occupied but two weeks in its construction, we were prepared to enjoy ourselves as well as if in a king's palace. But sickness in my family, owing to the dampness of the climate, prevented my performing as much work as otherwise I should have done. I spent some two months at this place, and then returned to my home at Ramree. My time was chiefly occupied in writing down words and phrases from the lips of one of the tribe who best understood the Burmese. My progress at first was quite slow, owing to the imperfect knowledge of the medium of communication between us, on the part of my teacher. Difficulties lay in my path of a somewhat formidable character; but by dint of perseverance I at length so far succeeded in comprehending the range of the sounds in the language as to form a plan for representing all. The results of my efforts may be seen in the accompanying paper, and the only two books which have been printed in that language, a spelling-book and reader, copies of which I send you.

The reading-book was revised in 1850 by my teacher, who was then under the supervision of Mr. Knapp, at my house in Maulmain. The teacher was P'ai-ting, the son of Chitsa; he had learned to read and write Burmese, and subsequently, under my instruction, learned to write and read his own language, according to the plan presented in the spelling-book. He became quite familiar with the newly written forms, and through his aid the reader was greatly improved at the time referred to. A catechism was added under the direction of Mr. Knapp, who was the first and only missionary appointed by our Board to labor with that people. His health soon failed, and his work was early terminated by his death. As no new missionary has been since appointed to the field, the books have remained unused."

THE Kemîs are a tribe of people residing in the northern part of Arrakan, the British province lying on the eastern coast of the Bay of Bengal. In the northern part of this province, which extends from north latitude $15^{\circ} 54'$ to about $22^{\circ} 30'$, are found several tribes speaking languages distinct from each other, called Mroongs, Toung Mroos, Koomis, Kemîs, and Khyens. The last mentioned are more numerous than any of the other tribes, and extend over some parts of Burmah and the central parts of Arrakan. The Kemîs are not found farther south than about twenty miles north of Akyab, the principal town of the province. North of that point, and on the highest elevations, the Toung Mroos and Mroongs have their homes, if such migratory people may be said to have a home. These various tribes are often at war with each other, yet their habits and modes of life are in many respects similar.

The Kemîs are reckoned among what are called hill or mountain tribes, yet very many of them reside near tide water. They often change their residence, and seldom do the inhabitants of a "village" remain more than two years in one locality. Having cut down a forest of bamboos, and burned what they do not use or raft and float down the rivers for sale, they clear and cultivate the ground. This they occupy for two successive seasons, raising rice, cotton, tobacco, and some few edibles, such as radishes, gourds, and the like. At the end of the second year, they abandon their bamboo huts, which by this time have begun to decay, and erect new ones in some other locality. But they seldom remove farther than a mile or two at once. This frequent moving, however, imposes on them no very heavy tax, as each man could carry all his household goods and farming utensils on his back in less than half a dozen loads.

It would doubtless be of interest to the reader to have presented a brief notice, at least, of the habits, manners, and customs of this singular people, but the brevity of the writer's sojourn among them, while his attention was chiefly and designedly occupied with the examination of the language, rendered it impracticable to pay much regard to these matters. Besides, he could scarcely venture to hazard many very specific statements regarding scenes and incidents, which at the time may have been strikingly interesting, but, after the lapse of more than twenty years, have greatly faded from the memory. A few facts only will claim our attention.

In stature, this people are generally below the average of the inhabitants of the country. In features, they resemble the Burmese, but they are mostly of a lighter complexion. They wear but little clothing. The men, when at work, have on merely a very narrow girdle about the loins, but they sometimes wear also a sort of jacket. In the girdle they constantly carry a long

heavy knife, which is ever at hand for any purpose for which we should use an axe, hatchet, or saw. This knife is always sharpened by grinding it only on one side. They take much pleasure in referring to this custom as a token of their being a "people of one word"—that is, men of truth. The women generally have fair features, and wear garments more becoming than those of the men. A skirt somewhat skilfully woven with colors and ornamented with beads, extending from above the hips to below the knees, is constantly worn, and above this a sort of jacket, without sleeves, and ornamented with beads of different colors. They always reside together in what are called "villages," which consist of from five or six to some twenty huts, built of bamboos, and surrounded by a stockade constructed of the same frail material. The stockade is designed for their protection from the wild beasts which inhabit the surrounding forests. Their food consists chiefly of boiled rice, to which is often added fish, fowls, pork, and the flesh of animals of the forest, as well as that of their own domestic buffalo. They sometimes succeed in killing a wild elephant, the flesh of which they highly prize. The soles of the feet of this animal they regard as a great luxury.*

Their huts are usually built wholly of bamboos, including the posts, rafters, walls, and floors, while the leaves serve the place of shingles. Sometimes, however, small poles serve for posts and beams or plates. They are neatly built, but, instead of spending months or years in their erection, the men not unfrequently begin and complete a house for a family in less than three days. In this work the villagers usually make common cause.

They are an industrious race, and are seldom seen lounging about and wasting the hours of daylight in sleep, as do many of the Burmese.

They have amusements, but these are chiefly of a very rude character. They often have feasts, at which a dance is apt to be indulged in. This is especially the case at their weddings. They have instrumental music on these occasions, played upon a sort of organ, formed by the insertion of some three or four bamboo tubes, of different lengths, into a gourd shell. The extremities of the tubes which enter the shell have bamboo reeds attached, which give sounds similar to those of a melodeon; these sounds very nearly form the "harmonic chord." Several holes in the tubes enable the performer to give an agreeable variety of sounds.

The wedding feasts are often preceded by a buffalo fight, as it

* The chief once brought to our house one of these soles, feeling highly elated with the privilege of presenting us with a rare treat. He was, of course, thanked for his kind intentions, but the dish was never served up.

is called; when the men, all armed with pikes made of sharpened bamboos, try their skill at tormenting the poor animal, by surrounding him, each man standing as guard to prevent his exit, while they pierce him with their cruel weapons. The unfortunate buffalo, after trying his strength for some time, to yield sport, Samson-like, to his savage tormentors, is at length overcome, and falls, to be hastily dressed, cooked, and eaten by the jolly throng. A dance by the light of their fire closes the scene for the night at a very late hour.

Sometimes, at a feast, a small hog is chosen for meat. After spilling the animal's blood, they suspend it from a pole by tying the feet together, and then, between two men, it is held over a blazing fire, till the hair is thoroughly singed off and the skin well scorched. It is then dressed, and in a similar manner held over the fire and roasted. The flesh thus cooked is served up with boiled rice and other vegetables, each helping himself to such as he can lay hold of, without table, knives, forks, or spoons.

In sickness, the Kem̄s have little to do with medicines. They have many superstitious notions regarding the influence of spirits residing in the mountains, and try to propitiate them in any case of sickness. In illustration of this, I would state an incident which elicited the advice of the chief's wife on the occasion of the sickness of my child, while I was residing among the people. After seeing the child suffer for several days with a high fever, and feeling at a loss to know what to do for her relief, this woman came in, expressing much sympathy, and recommended that we take a fowl (a domestic hen) to appease the anger of the spirit, and send it off into the jungle, and she believed that this step would bring relief, for it had often been successfully tried in such cases. On being told that we had no fowls, and that we had no confidence in that remedy: "Oh," said she, "I will furnish you with a fowl for the purpose."

They have the custom of observing the following ceremony on the occasion of a recovery from sickness. The person takes a common fowl, spills its blood over a running stream, and then his or her friends join in cooking and eating it by the side of the stream.

They have vague ideas of an exalted being, far superior to man, whom they call Lord, and they believe that at death all go to another state of conscious existence, similar to the one in this life. A scene at a cemetery on the banks of the Mee river (an eastern branch of the Koladon), above our residence, will perhaps best illustrate their views of the future state. While ascending that stream, for the purpose of visiting a distant village of Kem̄s, in company with Rev. Mr. Kincaid and several natives, we were told that a Kem̄ cemetery was near us. We left our

boat, and, by a short winding and steep ascent through the tall grass, we soon gained an eminence overlooking the stream, where we found the ashes and bleaching bones of many human bodies. Near the ashes of several we observed neatly constructed dwellings in miniature, resembling in form those in which the people reside. In these were placed the identical implements used by the deceased in their industrial pursuits, such as the heavy knife, the spinning wheel or loom, etc. By the side of each miniature house was suspended a basket-like cage, in which was placed a fowl, with a little rice for its food. Only one of these animals did we find alive; the rest had all starved in their cages. The main idea we gather from these relics, as confirmed by the people's testimony, is, that the deceased go to a place where they will need to use these implements, and will likewise need food; hence the fowl is provided for the sustenance of the departed one.

But it was not my intention to dwell on the peculiarities of this people. I must proceed to my main design of giving a brief outline of their language.

The Kemī language is what some would denominate monosyllabic, yet there is a tendency to the dissyllabic form. Most of its words of two syllables are not composed of two distinct words, as is the case in the Burmese language. It has also many words of three syllables, and some of four, but the latter are mostly composed of two dissyllables.

The construction of sentences is very simple. The language has no involved phrases. It has, it is true, compound sentences, but they are usually made up of two or more simple phrases of similar form, strung together without connectives. Connectives are not altogether wanting, but they are often omitted in conversation. The order of the words is, in very many cases, entirely the reverse of that usual in English.

Before naming the parts of speech, it will be necessary to describe the various sounds heard in this tongue. As these are presented in the Kemī spelling-book, or tabular view of all the admissible sounds of the language, a copy of which has been forwarded to the Society with explanations, I have thought it best, in giving an alphabet for our present purpose, to follow in part the order observed in that work for all simple and compound initials, the vowels, diphthongs, and finals.

The initials, thirty-eight in number, may be arranged as follows:

*k, ky, kr, k', k'y, k'r, g, gr, h, s, sr, s', s'r, z, ny, t, t', d, n,
p, py, pr, p', p'y, p'r, b, by, br, m, my, mr, y, r, l, hl, v, f, h.*

In the above list of initials, simple and compound, the following fifteen letters have, with slight exceptions, the same sounds

as in the English language: namely, *k, g, s, z, t, d, n, p, b, m, y, l, v, f, h*. The rough breathing after the letters *k, s, t, p*, denotes them as having a slightly aspirated sound. These aspirates are approximately illustrated by the letters *kh, sh, th, ph*, in the words *packhorse, mishap, pothouse*, and *haphazard*. When *y* follows any other consonant, it is, in sound, as closely combined with that consonant as is *l* with *s* in *slay*, and always has its consonantal sound, as in *youth*. The *r*, whether alone or in combination with another consonant, has but a very feeble pronunciation. By many, the sound given it is nearly that of a very feeble, though guttural, *g*. The combination *hl* must be pronounced in a manner similar to *sl* in *slow*. There is another sound, not given in the above list, which is a very feeble guttural, and for which our alphabet furnishes no suitable representative. It is therefore represented by placing an apostrophe before the vowels *a* and *o*.

There are in the *Kemī* language twelve pure vowels and five diphthongs. They are as follows:

<i>a</i> as in <i>apology</i> .*	<i>ō</i> as in <i>broad</i> .
<i>ā</i> as in <i>far</i> .	<i>o</i> as in <i>not</i> .
<i>ă</i> as <i>u</i> in <i>but</i> .	<i>ō</i> as in <i>note</i> .
<i>ē</i> as in <i>they</i> .	<i>āu</i> as <i>ou</i> in <i>loud</i> .
<i>e</i> as in <i>let</i> .	<i>āi</i> each vowel sounded as indicated above.
<i>ī</i> as in <i>police</i> .	<i>āi</i> do.
<i>i</i> as in <i>pit</i> .	<i>ei</i> do.
<i>ū</i> as <i>oo</i> in <i>moon</i> .	<i>ūi</i> do.
<i>u</i> as in <i>full</i> .	

The only final consonants ever employed are *n* and *ŋ*, the latter being the sound of *ng* in *sing*. One or the other of them may follow most of the vowels and diphthongs.

It may here be remarked that, as an almost invariable rule, words of two or three syllables are accented on the last. Hence it will generally be found unnecessary in these notes to indicate accent by any distinguishing mark.

Having thus given a key to all the sounds which may be presented in this sketch, we may proceed to notice the parts of speech employed. The nature of the language does not require the same distinctions which are observed in the English and other European tongues. The most natural division is into nouns, pronouns, verbs, adjectives, adverbs, connectives, prefixes, and affixes. As to adjectives, there are many, but, as they all usually take the form of verbs, they may be arranged with them.

Nouns are never varied, in their stems, on account of number, gender, or case. Gender is sometimes indicated by different words: as, *k'i-mī*, 'man'; *nāuŋ-pūi-dī*, 'woman'; *sa-pā*, 'son';

* This vowel sound is similar to that of *u* in *but*, yet always unaccented.

a-s'a-nū, 'daughter;' *pa-āi*, 'father;' *na-āi*, 'mother;' *pro-pri*, 'brother;' *si-sū*, 'sister.'

The plural of nouns is indicated by the affix *kī*: as, *k'i-mī*, 'man,' *k'i-mī kī*, 'men.' This affix is sometimes employed after verbal affixes, but its use is the same, as will be seen upon noticing the method of employing verbs.

The cases may well enough be considered under the heads nominative, possessive, and objective. They are, for the most part, indicated by distinctive affixes; but in the nominative and possessive cases the affix is frequently omitted.

The most common affix of the nominative case is *nāi*; *mā* is also sometimes employed, but it often has the additional signification 'and' or 'also.' *Lā* is also used, but it generally signifies 'if.'

The possessive case is often indicated by the word being immediately followed by the name of the object possessed: as, *k'i-mī kō*, 'man's hand;' *sūi-s'ūi fū*, 'elephant's tooth.' The same case is also marked by the affix *un*, which signifies 'of' or 'from:' as, *k'i-mī kī un prūn-yā*, 'men's wisdom.'

The objective case is denoted by a variety of affixes. *Ka'on* usually denotes the direct object of a transitive verb; it, however, sometimes signifies 'in.' The affix *'ā* often performs the same office, and it has also the different significations 'in, into, at, to, among.' The affix *be* signifies 'to, in, at.' It is often preceded by other qualifying affixes, such as *a-krōn*, 'the upper part,' *un*, 'the under part:' thus, *a krōn be*, 'on' or 'upon;' *un be*, 'under.'

The following are the principal pronouns:

<i>kāi</i> , I,	<i>kāi sī</i> or <i>ma āi sī</i> , we.
<i>noh</i> , thou,	<i>noh si</i> , ye.
<i>hān-nāi</i> } he, she, it,	<i>hān-nāi sī</i> }
<i>hō-nāi</i> }	<i>hō nāi sī</i> } they.
	<i>amā sī</i> }
<i>kāi un</i> or <i>kāi</i> , my,	<i>kāi sī un</i> or <i>ma āi sī</i> , our.
<i>noh un</i> or <i>noh</i> , thy,	<i>noh sī un</i> or <i>noh si</i> , your.
<i>hān-nāi</i> , his or her,	<i>amā sī</i> , their.
<i>amā</i> , one's self.	<i>hāi ka me</i> , some.
<i>ka-te</i> , other;	<i>akā-la-lāh</i> , all.
<i>hī-nāi</i> , this,	<i>hī-nāi sī</i> , these.
<i>hō-nāi</i> , that,	<i>hō-nāi sī</i> , those.

A few interrogative pronouns and other interrogatives are the following:

apāi me or *apāi nāi*, 'who?' *apāi sī me*, 'who?' (plur.) *na-nāi*, 'which?' *hā nī*, 'when?' *ta-āi me*, 'what?' *ta-āi nān be me* or *nā-nāi be me*, 'where? that is, in what place?' *hāi-ka-te*, 'why?' *nā-kā*, 'how?'

'Who,' as a relative pronoun, is given as a connective or affix to a verb.

The following are a few of the adverbs in quite frequent use:

avāi, 'now'; *vāi nī*, 'to-day'; *sukôn*, 'to-morrow'; *yo nī*, 'yesterday'; *tô dī*, 'early'; *hāi-ma-gāi*, 'exceedingly'; *a nāi-ma-gāi*, 'very well'; *kā-ā*, 'very'; *hī 'ā* or *hī be*, 'here'; *hôn 'ā*, *hôn be* or *to-nāi be*, 'there.'

VERBS.—This class of words, of course, occupies a very prominent place in the language, and demands particular notice. It is made to include all that class of words known in our language as adjectives. For example, *good* in this language is *to be good*, and so of all other adjectives.

The verb itself undergoes no change, but a great variety of modifications in sense are effected by the use of affixes. The principal affixes are given below, without special regard to systematic order.

kā. This is simply assertive, without regard to tense: as, *kāi ma lē kā*, from *ma-lē*, 'to strike': this signifies 'I strike,' 'I struck,' or 'I will strike.'

te. This affix performs the same office as *kā*, and is perhaps of rather more frequent use.

tôn, *s'āi*. One or both of these may be used before the assertive affix *kā*. They denote a customary action: as, *kāi ma-lē tōn s'āi kā*, 'I am accustomed to strike.'

k'rā. This denotes ability: as, *kāi ma-lē k'rā kā*, 'I can strike'; it is used with or without the assertive *kā*.

ā is negative: as, *kāi ma-lē ā kā*, 'I do not or did not strike'; *kāi ma-lē k'rā ā*, or *kāi ma-lē k'rā ā kā*, 'I cannot strike.'

nāi, as a verbal affix, signifies desire: as, *kāi ma-lē nāi kā*, 'I wish to strike'; *kāi ma-lē nāi ā*, 'I do not wish to strike.'

mān signifies 'yet' or 'already': as, *kāi sī ā mān*, 'I do not go yet'; *kāi sū ā mān*, 'I do not eat yet'; *bū sū mān kā*, '(I) have already eaten rice.'

bā is an interrogative affix, a sign of the direct question: as, *noh bū sū ā mān bū*, 'have you not yet eaten rice?'

me or *tān*, an interrogative, a sign of the indirect question: as, *ta-āi nān be sī me*, or *ta-āi nān be sī tān*, 'whither do you go?'

vī, *i*, *lē*. These are imperative affixes: as, *vā vī*, *vā i*, or *vā lē*, 'come!'

The verb is often used alone for the imperative: as, *bū sū*, 'eat rice.'

lā, or *na-lā*, is a conditional affix: as, *bū sū nāi ka na-lā sū*, 'if (you) wish to eat rice, eat.' *Lā* sometimes signifies 'when': as, *bū sū lā*, 'when (you) eat rice.'

nā is an affix prohibitive: as, *bū sū nā*, 'do not eat rice.'

pā signifies completion: as, *bū sū pā-de bū*, 'have (you) done eating'

ma-kā and *tī* are future affixes: as, *hān-nāi sī vā ma-kā*, 'they will come.'

kā. This, when not used as a final or assertive affix, signifies 'for,' 'in order to': as, *tūi ka-hu kā vā lē*, 'go in order to bathe (in) water'; *tūi* meaning 'water,' and *ka-hu* 'bathe.'

sī is a precative affix: as, *bū sū sī*, 'let us eat rice.'

nī, as an affix, signifies 'only.'

ta-ā signifies 'while:' as, *Yē-sū nāi k'i-mī prāin be ōn ta-ā*, 'while Jesus was in man's country.'

ta-un. This affix to a verb may be regarded as a connective, or as usually equivalent to 'who' or 'which:' as, *hāi ta-un k'i-mī*, '(a) man who is good,' or 'a good man.' It is sometimes equivalent to our termination *tion*.

ta-k'ón means 'because,' 'on account of,' 'that:' as, *sā-pre tūi ku-te ta k'ón*, 'because the wine (grape water) was gone.'

k'rāi means 'as,' or 'in like manner.'

sā is a euphonic affix, often placed before the assertive affix *kā*.

ka'ón, as a verbal affix, often signifies 'that.'

ū is a plural affix, but is not often used: as, *hó-nāi sī ka-nāi ū ma kā*, 'they will listen.'

kā-ā means 'very:' as, *hāi kā-ā kā*, '(is) very good.'

k'ón. This affix gives to the verb a participial signification, and frequently denotes a continuation, being equivalent to 'and:' as, *hān-nāi s'ā k'ón ōn kā*, 'he is working;' *k'i-mī hó-nāi ma nū k'ón lu te*, 'that man sees and goes,' or 'seeing goes,' *ma nū* signifying 'to see,' and *lu* 'to go.'

I must not be farther tedious in enumerating affixes, though the list might be considerably extended.

A brief list of words, with the equivalents in this language, may be acceptable.

Man,	<i>k'i-mī</i> .	ngly,	<i>ka-n'ón ā</i> .
woman,	<i>noh-pui-dī</i> .	ox or bull,	<i>k'rā-bāi</i> .
boy,	<i>no-de</i> .	cow,	<i>k'rā-bāi na-āi</i> .
girl,	<i>noh-pui-dī sa-pī</i>	bird,	<i>ta-vū</i> .
father,	<i>pa-āi</i> .	hen,	<i>ā</i> .
mother,	<i>na āi</i> .	duck,	<i>mō-pāi</i> .
son,	<i>sa-pā</i> .	eagle,	<i>k'uñ n'ón</i> .
daughter,	<i>s'a-nū</i> .	dove,	<i>ma-k'rū</i> .
brother,	<i>pro-prī</i> .	horse,	<i>sa-p'ū</i> .
sister,	<i>si-sā</i> .	dog,	<i>ūi</i> .
old,	<i>ko-l'ā kā</i> .	hog,	<i>ō</i> .
young,	<i>ta-lā</i> .	mouse,	<i>ma-yū</i> .
great,	<i>lin te</i> .	rat,	<i>ta-vó</i> .
small,	<i>a sa-pī.*</i>	goat,	<i>s'ō be</i> .
wide,	<i>lin te</i> .	rhinoceros,	<i>s'ā-ma-groñ</i> .
narrow,	<i>a grūh te</i> .	elephant,	<i>s'ūi-s'āi</i> .
high,	<i>s'ón te</i> .	deer,	<i>ta-gre</i> .
low,	<i>nāi de.†</i>	pigeon,	<i>ín-ma-k'ū</i> .
long,	<i>a ka s'ó, s'ó kā</i> .	air,	<i>ka-lī</i> .
short,	<i>a ka dūi</i> .	water,	<i>tūi</i> .
good,	<i>hāi kā</i> .	milk,	<i>ta-nū tūi</i> .
bad,	<i>hāi ā, só-l'ō</i> .	blood,	<i>a-t'i</i> .
handsome,	<i>ka-nón kā</i> .	sweet,	<i>tū te</i> .

* Adjectives are often formed by prefixing *a* to the verb and omitting the affix.

† The affix *te* is often changed to *de*.

sonr,	<i>t'ō te.</i>	to be,	<i>ōh te, or ōh kã.</i>
bitter,	<i>k'ā te.</i>	" be (denoting	
black,	<i>ma-nūh te.</i>	identity),	<i>t'ō te.</i>
blue,	<i>kā-nūh.</i>	" listen to,	<i>ka'nāi te.</i>
white,	<i>kā lūh.</i>	" pity,	<i>ma k'reh te.</i>
yellow,	<i>ko-s'in.</i>	" learn,	<i>ka tū te.</i>
green,	<i>ko-ih.</i>	" drink,	<i>nē te.</i>
red,	<i>ko-lih.</i>	" look,	<i>ta k'ōn te.</i>
tree,	<i>t'i-kōh.</i>	" make,	<i>s'ā te.</i>
stone,	<i>ta-hlūh.</i>	" place,	<i>k'āi te.</i>
fire,	<i>māi.</i>	" buy,	<i>k'rān te.</i>
fish,	<i>māi.</i>	" sell,	<i>yō te.</i>
hair (of animals),	<i>mūi.</i>	" give,	<i>na-pā te.</i>
hair (of the head),	<i>a s'ōh.</i>	" receive,	<i>ko-lih.</i>
head,	<i>a lū.</i>	sun,	<i>ka-nī.</i>
eye,	<i>a mī.</i>	moon,	<i>hlā.</i>
ear,	<i>a ka-nā.</i>	star,	<i>a s'i.</i>
arm,	<i>a kō-būn.</i>	day,	<i>ma-nī.</i>
hand,	<i>a kō.</i>	night,	<i>ma-dūh.</i>
leg, foot,	<i>a k'ō.</i>	cloud,	<i>k'ā a niñ.</i>
finger,	<i>a kō ma-yūh.</i>	rainbow,	<i>sa-kī-li-lū.</i>
east,	<i>ka-nī-sē.</i>	light,	<i>ka-voñ.</i>
west,	<i>ka-nī ka-dūh.</i>	house,	<i>ih.</i>
north,	<i>ta-vā sī (up the</i>	bamboo,	<i>k'ō, dāi.</i>
	river).	fruit,	<i>a t'āi.</i>
south,	<i>ta-vā ta-pe (to-</i>	flower,	<i>a po.</i>
	ward the mouth	leaf,	<i>a k'ōh.</i>
	of the river).	sugar,	<i>sa-krū.</i>
to go,	<i>sī te, lu te.</i>	meat,	<i>a nā.</i>
" come,	<i>vū te.</i>	rice (uncooked),	<i>sa-nī.</i>
" work,	<i>s'ā te.</i>	cooked rice,	<i>bū.</i>
" eat,	<i>sā te.</i>	river,	<i>ta-vā.</i>
" sleep,	<i>ta hō te.</i>	brook,	<i>vā-dī.</i>
" run,	<i>ka krūi te.</i>	gun,	<i>li-pō.</i>
" speak,	<i>ta pē te.</i>	knife,	<i>kē.</i>
" hear,	<i>tāi te.</i>	cap	<i>lū-k'ū.</i>
" read,	<i>prāi te, or sā</i>	city,	<i>lū-k'ūh.</i>
	<i>prāi te.</i>	cloth,	<i>nī-no.</i>
" see,	<i>nū te.</i>	cotton,	<i>mo-hlā.</i>
" stand,	<i>ka dō te.</i>	cigar,	<i>s'ró-dī.</i>
" carry,	<i>ta pū te.</i>	mountain,	<i>ta-kōn.</i>
" bring,	<i>ma-hāi te.</i>	hill,	<i>ta-kōn sa-pī.</i>
" endure, suffer,	<i>k'ōh te.</i>	jack tree,	<i>ma-nāi kōh.</i>
" love,	<i>hlo-te.</i>	earth,	<i>ka-lūi, ka-lūi k'rōh.</i>
hate,	<i>a mī nāi te.</i>	sky,	<i>k'ō-s'i-nī.</i>
" cut,	<i>ta krā te.</i>	mouth,	<i>a ma-k'ā.</i>
" dig,	<i>tāi te.</i>	tooth,	<i>a fā.</i>
" dance,	<i>ma loh te.</i>	tongue,	<i>a ma-lāi.</i>

It will be seen by the above list that the syllables *ta*, *ka*, and *ma* are frequently occurring prefixes to verbs. They are sometimes omitted in the composition of sentences. I might extend this list to a thousand or more words, but that is not desirable for our present purpose.

We add the following numerals:

- 1, *hān*; 2, *nī*; 3, *t'ūh*; 4, *ma-lī*; 5, *bo-nā*; 6, *ta-grū*; 7, *s'ri*; 8, *ka-yā*; 9, *ta-kō*; 10, *k'rā-s'ā*; 20, *kūi-s'ā*; 30, *k'rūi t'ūh*; 40, *k'rūi ma-lī*; 50, *k'rūi bo-nā*; 60, *k'rūi ta-grū*; 70, *k'rūi s'ri*; 80, *k'rūi ka-yā*; 90, *k'rūi ta-kō*; 100, *ta-grū*; * 1,000, *ta-tāuh*; 10,000, *ta-s'āuh*; 100,000, *ta-siñ*; 1,000,000, *ta-s'āuh*; 10,000,000, *ta-kū-dī*.

A few selections from the *Kenī Reader*, and some other sentences, must suffice to show the structure of this language.

The first selection is to be seen printed in the chosen characters on page 12 of the *Reader*:

1. *nāi ka-'oh s'ā-ma-groñ a grū òh kā.*
1. Here rhinoceros picture is, or, here is the picture of a rhinoceros.
2. *s'ā-ma-groñ nāi dāi t'ūh be òh s'āi kā.*
2. The rhinoceros lives in the jungle (forest).
3. *s'ā-ma-groñ nāi s'āi-sāi kāñ te tō līn kā.*
3. The rhinoceros is as large as a young male elephant.
4. *s'ā-ma-groñ nā s'āi kā.*
4. (We) are accustomed to eat the flesh of the rhinoceros.
5. *s'ā-ma-groñ a ma-nū kroñ-'ā a ta-kī hān-tō òh kā. a ta-kī lā ta-grū k'i-mū k'rān k'oh a voh ko s'āi kā.*
5. (The) rhinoceros has one horn on (his) nose. The horns Chinamen buy, paying a (great) price.

Again, on page 8:

3. *ka-ti-kōñ nāi k'rī tō ka t'āi lā, du s'āi kā.*
3. (The) plantain tree having borne fruit (fruited) once dies (or is accustomed to die).

Again, on page 21:

1. *nāi ka-'oh sa pā nāi soñ-gre te pa-āi mūn be kū-kū te agrū òh kā.*
1. Here is (the) picture of (a) poor man returning to (his) father.
2. *a môn nāi Yē-sū ta pē ta-uh a grū tō kū kyān-sā be òh kā.*
2. This matter is in (the) scripture related (in) a parable (or figure) which Jesus spoke.
3. *ma-āi-sī a-k'rā la-lāñ pa-āi lā a pāi me.*
3. Who is the father of us all?
4. *k'ō-hā-k'roñ-hā ka-'oh ma-suñ ta-uh ki-nī-k'ō-nā ma-āi-sī a k'rā-la-lāñ pa-āi òh sū kā.*
4. God, who created all things, is the father of us all.
5. *kāi sī mā a tōñ doñ te ma-luñ hāi k'ō-s'i-nī pa-āi 'ā ka-yuñ s'āi bā.*
5. Do we with penitent hearts trust in (our) father (in) heaven?

* The denominations from 100 upwards are borrowed from the Burmese language.

Analysis of the last sentence: *kāi sī*, 'we,' *mā*, nominative affix; *a tōh don te*, 'to repent,' *ma-luh*, 'heart,' *hāi*, 'with,' *k'ô-s'i-nī*, 'sky,' or 'heaven,' *pa-āi*, 'father,' 'ā, objective affix; *ka-yuh*, 'to trust in,' *s'āi*, affix denoting customary action; *bă*, interrogative affix.

The following short sentences will need no analysis:

ta-grā hāi kâ, 'the law is good,' *k'i-mī nāi hāi kâ*, 'that man is (a) good (man),' *s'āi-s'āi hān tô oh te*, 'there is an elephant,' *ma-lōh ka yô vi đũ*, 'the boat is gone,' *s'ā nă*, 'do (it) not,' *sī sī a grī ôh kâ*, 'keep silent,' *hī-nāi la-hāi vī*, 'take this away,' *māi kon vī*, 'burn (it in the) fire,' *māi ma-tī vī*, 'put out the fire,' *vă ma-lă-lin*, 'come quickly,' *sa-k'ôn ta-dī vă*, 'come to-morrow early,' *noh bū sâ bă*, 'will you eat rice?' *ô nă noh sâ â bă*, 'do you not eat pork?' *tūi a k'reh bă*, 'are (you) thirsty for water?' *tūi ka k'ren kâ-ă koh*, '(I) am very thirsty.'

The following are extracts from the catechism in the Reader:

1. *K'ô-s'i-nī hāi ka-lāi k'rōn ka 'oh a pōi nāi ma-suñ ta-un me*.
1. Who created the heavens and the earth?
2. *yô-k'ôn 'ā k'ô-s'i-nī hāi ka-lāi-k'rōn ka-on ki-nī-k'ô-mā ma-suñ ta-un kâ*. *ki-nī-k'ô-mā nāi k'i-mī*, *ma-yū*, *ta-vū kī mā-ôh te s'a-grūi kī 'ā ma-suñ ta-un kâ*.

'God in the beginning created the heavens and the earth. God created man, creeping things, birds, and all things.'

3. *ki-nī k'ô-mā lă a pāi me*, 'Who is God?'
4. *ki-nī-k'ô-mā lă atī atōh ôh ă*, 'God has no beginning or end,'
5. *ta-hlei ta-ôh ôh ă*, 'is unchanging,'
6. *ta-s'a-ta-k'ôh ôh ta-un kâ*, 'lives eternally,' or, 'is one who is eternal,'
7. *kô-hā k'rōn-hā ăa-oh ôh lă*, *ma-āi-sī hāi-ka-te nū k'ră ă me*. 'If (God) is in all places, why can we not see (him).'

Analysis of the last sentence: *kô-hā k'rōn-hā*, 'all places,' *ôh*, 'is,' *lă*, 'if,' *ma-āi-sī*, 'we,' *hāi-ka-te*, 'why?' *nū*, 'see,' *k'ră ă*, 'cannot,' *me*, interrogative affix.



THE LORD'S PRAYER.

K'ô-s'i-nī t'uh be ôh ta-un kâi sī pa-āi noh uh amin 'ā agrī anoh ôh i s'oh. *Noh prāih kâi i s'oh*. *Alu nāi k'ô-s'i-nī t'uh be kâi ta un k'rāi ka-lāi-k'rōn k'rōn 'ā kâi to i s'oh*. *As'o k'rīn k'rān aso 'ā kâi sī 'ā ma-nin tăn na-pô i*. *K'i-mī ka-te nāi kâi sī 'ā s'ā-k'rāi ta-un a pre kī 'ā*, *kâi sī nāi ma hlô-ă ta-k'rāi*, *kâi sī uh a pre kī 'ā nă ma hlô i*. *Nă ma hlāh ta-un be kro ă k'oh*, *hāi ă ta-un a-nôn a-grā kī hāi lô k'rū te ta-k'ôn nă ka-lôn nă ma k'reh i*. *Amin*.

An analysis of the above prayer: *K'ô-s'i-nī*, 'heaven,' *t'uh be*, 'in,' *ôh*, 'is,' *ta-un*, 'who,' *kâi sī pa-āi*, 'our father,' *noh uh*, 'thy,' *amin*, 'name,' 'ā, affix; *agrī anoh*, 'set up,' or 'establish,' *ôh i s'oh*, 'be it,' *Noh prāih*, 'thy country,' or 'kingdom,' *kâi i s'oh*, 'be placed,' *Alu nāi*, 'will,' or 'desire,' *t'uh be*, 'in,' *kâi ta un*, 'what is done,' *k'rāi*, 'like as,' *ka-lāi-k'rōn*, 'earth,' *k'rōn 'ā*, 'upon,' *kâi to i s'oh*, 'be it done,' *As'o*, 'life,' *k'rīn*, 'to live,' *k'rān*, 'sufficient,' *aso*, 'food,' 'ā, objective affix; *kâi sī 'ā*, 'us,' *ma-nin*, 'day,' *tăn*, 'every,' *na-pô*, 'give,' *i*, imperative affix. *K'i-mī ka-te*, 'other men,' *nāi*, nominative affix;

s'ā-krāi ta-un, 'which transgress;' *a pre*, 'sin;' *kī*, plural affix of nouns; *kāi sī*, 'we;' *ma hlō-pǎ*, 'forgive;' *ta-k'rāi*, 'as,' or 'like as;' *kāi sī un*, 'our;' *ma hlō ī*, 'forgive (imperative).' *Ma hlǎn ta-un*, 'temptation;' *be*, 'in,' or 'into;' *kro ā k'oh*, 'lead not;' *hāi ā*, 'not good;' *ta-un*, 'which;' *a-món a-grā kī*, 'matters, business,' or 'things;' *hāi lô k'rā te*, 'can or may be kept from;' *ta-k'ón*, 'that;' *nā ka-lōn*, 'save;' *ma k'reh ī*, 'pity.'

Extracts from notes taken might be indefinitely extended, but perhaps enough has already been said to give a sufficient idea of the language.

AMERICAN ORIENTAL SOCIETY.

Proceedings at Boston and Cambridge, May 20th and 21st, 1863.

THE Society came together for its Annual Meeting on Wednesday, May 20th, 1863, at 10 o'clock A. M., at the room of the American Academy of Arts and Sciences, in the Athenæum building, Boston.

Prof. Beck of Cambridge, one of the Vice-Presidents, took the chair and called the Society to order, adverting, as he did so, to the disappointment of the hopes which had been entertained at the last meeting, in Princeton, that the Society would this time enjoy the presence of its President, Dr. Robinson, and to the painful loss which it had sustained, in common with the whole learned world, by his recent decease.

After the reading of the minutes of the previous meeting by the Recording Secretary, reports from the retiring officers were called for and submitted.

The Treasurer presented his accounts, which, after due examination by an auditing committee, were accepted. His general statement of the transactions of the year was as follows:

RECEIPTS.

Balance on hand, May 21st, 1862,	-	-	-	-	-	-	\$565.95
Member's fees: ann. assessments for 1863-64,	-	-	-	\$45.00			
do. do. for previous years,	-	-	-	195.00	240.00		
Interest accumulated on deposits in Savings Bank,	-	-	-	-	73.46		
Sale of Journal,	-	-	-	-	124.17		
Total receipts of the year,	-	-	-	-	-	\$437.63	
						\$1003.58	

EXPENDITURES.

Printing of Journal, Vol. VII (balance),	-	-	-	-	-	\$509.26	
Expenses of Library and Correspondence,	-	-	-	-	-	35.39	
Total expenditures of the year,	-	-	-	-	-	\$544.65	
Balance on hand, May 20th, 1863,	-	-	-	-	-	458.93	
						\$1003.58	

The Treasurer called attention to the considerable diminution of the balance on hand during the past year. This was due in part to the remission by the Society of the assessment for the year 1862-63, and would have been much greater, had there not been unusually large receipts from other sources. He stated that rather more than \$200 was still due the Treasury from members, for assessments of 1861-62 and previous years, not yet paid in. He recommended the authorizing of a special effort to collect these outstanding dues, during the present

interval in the levying of the regular assessments. It was accordingly, upon motion, voted by the Society, that the Treasurer be authorized and instructed to send out bills again to all members in arrears, pressing upon them the desirableness of a settlement, without farther delay, of all accounts past due.

The Librarian read the list of donors to the Library and Cabinet during the year,* and briefly described those of the donations which seemed to call for spécial notice. But forty-seven titles of printed books, and one of manuscripts, had been added to the catalogue since May last, the most valuable and important accessions having been continuations of series already commenced. The gift of highest value had been one made to the Cabinet by Rev. William Clark, now of West Brattleboro, Vermont, being a collection of eighty-four coins, gold, silver, and copper, of Greek, Roman, Byzantine, and Oriental mintage, many of them of great antiquity and beauty, or of interest from other qualities.

The Committee of Publication reported that the printing of the new Number of the *Journal* had not yet been begun, but would soon be taken up. The Number would be filled chiefly with contributions* from members at home, which had in part been presented at the preceding meeting, and in part would be brought forward at this meeting.†

The Directors announced to the Society that they had adopted for the meeting the order proposed by the Committee of Arrangements, which was as follows: to devote the session of Wednesday forenoon entirely to the transaction of business and other matters proper to be brought forward at the Annual Meeting; to assemble again at 4 o'clock, p. m., at the residence of Dr. Peabody, in Cambridge, for the reception of communications; to adjourn in the evening in season to accept an invitation kindly extended by Dr. Beck to the members of the Society and their ladies, to be present at a social gathering at his house; and to come together for a continuation of the literary session, in Boston, at 9 o'clock on Thursday morning. Farther, that they had re-appointed the Committee of Publication of the preceding year. That they had designated New Haven as the place of the next Semi-annual Meeting, to be held on Wednesday, October 14th, 1863, and had named Profs. Salisbury, Hadley, and Whitney as a Committee of Arrangements for it.

The Directors also presented the names of persons whom they nominated for election to membership in the Society, and the Society thereupon proceeded by ballot to accept and ratify the nominations. As Corresponding Members, were thus elected

Bhau Dâji, Esq., of Bombay.

Babu Râjendralâla Mitra, of Calcutta.

* The donations received prior to the meeting of October, 1862, are acknowledged in the last Part of the Seventh Volume of the Society's *Journal*.

† Prof. Whitney, on Biot and Weber's views respecting the relation of the Chinese and Hindu Asterisms, with an addition, upon Muller's recently published opinions upon the same subject; Rev. L. Stilson, on the Kemi Language; J. P. Brown, Esq., a translation of part of a Sûfi treatise on the *Tesavvuf*, or Spiritual Life of the Sûfis; Prof. Hadley, on the aspirate mutes of the primitive Indo-European language; Prof. Salisbury, on the tenets of the Arabs, before and since the rise of Islam, respecting predestination and moral responsibility.

The Corresponding Secretary laid before the meeting the correspondence of the past six months, and read such parts of it as were of a character to interest the members present.

The annual reports being now disposed of, Prof. Salisbury rose to direct the attention of the Society anew to the loss it had recently sustained, in the death of its President, Dr. Robinson, and to suggest a formal tribute of respect to his memory. He spoke as follows:

This seems to be the proper time for us to pause, to notice and record the great bereavement which this Society has experienced, since we last met, in the decease of its honored President. There is always a sense of loss, independently of all endearing attachments, or habits of reliance, when one whom we have long been accustomed to count among the living is at length numbered with the departed. But, not to speak here of the rupturing of tender ties of affection, when the person withdrawn from the scenes of earth is one whose character, intellectual abilities, and attainments have attracted the notice, and won the respect, of his countrymen; and especially, if he has been looked up to as the representative of any higher department of labor for the public good; and yet more, if his name has reflected honor upon his country in foreign lands, where older civilization should give a more just appreciation of all that tends to advance the race in knowledge and virtue—I say that, under such circumstances, the void which common human sensibility always suffers by the death of any one whom we have known, is more deeply and widely felt. Such is the case in respect to our late President. This Society is fortunate in having been presided over, during the whole period of its existence, by two men of such eminence, in scholarly qualities and acquisitions, as well as in their appreciation and advocacy of the cause it represents, as Dr. Pickering and Dr. Robinson. To the enthusiasm of our first President in behalf of all learning we owe it, indeed, in great measure, that this Society exists; and our obligations to the second are not inferior, for the support which his well-earned fame as a scholar has been constantly giving to us. Dr. Robinson was not a man of the ardent temperament which all admired in his predecessor in that chair: his calling was not to draw around him new votaries of science, by the contagion of sympathy with a passionate devotion to it; but rather to shine, with a steady, sure light, upon the path of those whom he found already seeking after knowledge. Deliberate in forming his opinions, he was always to be relied upon for whatever conclusions he arrived at, as certain to have arguments in their favor which could not easily be gainsaid. His mind was formed for research, and for building up a solid structure of ascertained truth, stone by stone; but not for flights of imagination. He was also a fair minded man, ready to recognize, and desirous to possess himself of, all the discoveries of others. No American scholar, perhaps, has come nearer than he, as regards method and scope, in his department, to the high German ideal of a "Gelehrter." As a Hebrew linguist, he was unsurpassed by any of his countrymen, not to say that he led them all; and it may be confidently affirmed that no one, either in this country or in Europe, within the same period, has equalled Dr. Robinson in his contributions to the branch of learning which especially occupied the later years of his life—that of biblical geography. Having twice visited Palestine, after years of preparation, he was able to seize upon and fix many identifications of localities, for the first time, by which he did much to reduce to actual shape our ordinarily too visionary conceptions of the sites of Jewish and early Christian history. His authority in this field of research, as is well known, is classic wherever any value is attached to such knowledge. With all his attainments and widely spread reputation, he was modest, and at the farthest remove from obtrusiveness—yet he preserved a due self-respect. He was a Christian scholar—and as such, I am sure, did not fail to own devoutly that, in the pursuit of learning, as well as in all other walks of life, the Christian spirit of docility is ever to be sought for and cherished; and that, while one must diligently use all merely human appliances for the acquisition of knowledge, there is also a light from above to be obtained by childlike communion with the Father of our spirits.

I am conscious that I do but indicate in the faintest manner the claims of the late President of this Society to our respect and grateful recollection; but this

humble tribute to the memory of our lamented associate is all that my leaden speech allows me to offer. My purpose, however, was not so much to attempt to be the spokesman of the Society, on this occasion, as to move that a committee be appointed, by the Chair, to prepare some suitable resolutions in memory of Dr. Robinson, in the hope that the motion will call forth worthier expressions of our sentiments.

The motion was seconded by Prof. Barrows, of Andover, who offered a brief sketch of the life and labors of Dr. Robinson, and an estimate of his character as a scholar and a teacher:

Sir:—The remarks which have just been made touch a chord that must vibrate long and mournfully in the heart of every American scholar. In consideration of the fact that Dr. Robinson's first work which gained him reputation as a scholar was done in Andover, and also that for many years my department of study has been the same as that which he prosecuted with such illustrious success, it may not be inappropriate that I should, on this occasion, refer briefly to his life, character, and literary labors.

A native of Southington, Connecticut, where he was born on the 10th day of April, 1794, and graduated in 1816 at Hamilton College, he first came to Andover in 1821, to superintend the printing of an edition of the first six books of the Iliad, which he had prepared with notes for the press. He was already a widower, having lost in 1819 his first wife, a daughter of the Rev. S. Kirkland, missionary to the Oneida Indians. In Andover, his acquaintance with Prof. Stuart naturally introduced him to the field of biblical study, and it was during his first residence there, extending from 1821 to 1826, that the fruit of his labors in that department began to appear. Besides holding, for a part of this period, the office of assistant instructor in the department of Sacred Literature, he and Prof. Stuart published conjointly, in 1825, a translation of Winer's Grammar of the New Testament. In the same year he published also a translation of Wahl's *Clavis Philologica Novi Testamenti*—which was his first effort in the line of New Testament lexicography. In 1826 he went to Europe, where he spent four years in study and travel. Here he married, for his second wife, the gifted daughter of Prof. Jacob, of Halle, well known to the literary world under the name of *Talvi*. Returning to Andover, he received in 1830 the appointment of Professor Extraordinary of Sacred Literature, which he held till 1833, when he resigned the office and removed to Boston, residing there till 1837. During the whole term of his second residence in Andover and his subsequent residence in Boston, his labors in the field of biblical literature were abundant. In 1831, the Biblical Repository was established by him in Andover. In this periodical the cause of biblical learning made a sudden and great advance. There had never been in America a theological quarterly of so high a character, at least so far as the department of Sacred Literature was concerned. The volumes of this work which he edited, from 1831 to 1834, are exceedingly valuable, and are to the present day in special demand. In 1832 appeared his revised edition of Calmet's Dictionary of the Bible. This, in its day, was a valuable work; although, as the Professor himself remarks in the preface, it contained very many things which he would never have inserted, but which, being once there, he did not feel himself at liberty to reject. Whoever had occasion to consult it soon learned that the cream of the whole volume was contained in the brief notes that bore the signature "R." That even his own additions to Calmet ceased during his lifetime to be of authority was not his fault, but preeminently his merit. His researches in the field of biblical learning revealed to him many errors into which he had fallen, and he wished it to be understood that neither this work, nor his Bible Dictionary for the young, which appeared in 1833, was any longer worthy of circulation.

In 1832 appeared the first edition of Dr. Robinson's translation of Buttmann's Greek Grammar; in 1839, a second edition of the same; and in 1851, a new translation from the 18th German edition. A Harmony of the Gospels in Greek, in the general order of Le Clerc and Newcome, with Newcome's notes, the whole revised and the Greek text newly arranged, was published under his supervision in Andover in 1834. The Harmony of the Four Gospels, published in Boston in Greek in 1845, and in English in 1846, is a revised form of this. In 1836 appeared Dr. Robinson's own Greek and English Lexicon of the New Testament, and in 1850 a

new edition, mainly re-written. In the same year he issued his translation of Gesenius's Hebrew Lexicon, which has subsequently gone through several editions. To speak of the merits of these lexicons would be a superfluous work. Their widely extended circulation in this country and in Europe, and the persistent use made of them year after year, bear witness to the fact that they meet in a satisfactory way a most important want of biblical scholars. In truth, these lexicons—with their precursors, Robinson's translation of Wahl's *Clavis*, already noticed, and Prof. Gibbs's excellent *Manual Hebrew Lexicon*, abridged from Gesenius—inaugurated for American and English scholars a new and brighter era in the department of biblical lexicography. It is not possible that biblical scholars of the present day should comprehend the difficulties under which those of us labored who began our study of the Holy Scriptures in the original tongues some forty years ago. Were the works just spoken of to be now annihilated, the biblical scholar could find other efficient helps; but it was not so when Prof. Robinson commenced his labors. Then a darkness that was painfully felt rested on the field of biblical lexicography. It is true that his labors here were not isolated and independent. He had many noble coadjutors, in both special and general lexicography, particularly the eminent lexicographers of Germany. Without their aid he could not have accomplished his great and good work in this department. To him God granted the privilege of turning a branch of the mighty stream of philological investigation that had newly burst forth with such freshness and fullness, into the city of our God, that it might thereby be watered and refreshed. In this respect his services are invaluable.

In 1837 he was elected to the professorship of Biblical Literature in the Union Theological Seminary of New York City. But before entering upon its duties, he carried into execution his long-cherished plan of exploring Palestine and the adjacent regions in the interest of biblical learning. His explorations were made in 1838, in company with the Rev. Eli Smith, a veteran missionary of the American Board. The results were afterwards embodied in his *Biblical Researches*, prepared in Berlin, and published simultaneously in the year 1841 in Halle, Boston, and London. In 1852, he made a second visit to Palestine, with special reference to the topography of Jerusalem and the geography of the northern part of Palestine. During the more important part of this second journey, his companion in travel was, as before, the Rev. Eli Smith. From Hasbeiya to Bânis and back, and then on the way to Damascus, until within a day's journey of that city, he was accompanied by the Rev. W. M. Thomson. Afterwards, from Damascus to Ba'albek, and around the northern end of Lebanon to Beirut, the Rev. S. Robinson became his companion. The results of these new investigations are given in the third volume of his second edition of the *Biblical Researches*, published in Boston in 1856, the two previous volumes being a revision of the matter contained in the first edition. It was a great favor, as well to Dr. Robinson as to the Christian church at large, that in these two journeys he was permitted to enjoy the invaluable assistance of such a man as Dr. Eli Smith, a keen observer, thoroughly acquainted as well with the geography of the region as with the language and character of the Arabs. How much the *Biblical Researches* are indebted to him for their present completeness, will perhaps never be known. It is sufficient to say that without his constant aid Dr. Robinson could never have accomplished such a thorough work of exploration as that of which we have the record in these volumes. Equally fortunate was Dr. Robinson in obtaining, for the construction of his maps, the services of a geographer like Kiepert. Whoever reads Kiepert's memoir on the maps accompanying the *Researches*, occupying twenty-seven pages of the third volume of the first edition, will see how much these volumes are indebted to his genius for the accurate maps which add so much to their value.

The *Biblical Researches* are the great work of Dr. Robinson's life, that work which has given him a world-wide celebrity, and helped, more than any other, to change the whole face of biblical geography. Any eulogy which I could bestow upon it would be superfluous. One fact alone is sufficient to attest the estimate put upon it by learned men. Whenever we take up a recent standard work that covers the field of these investigations, whether it be a lexicon, a commentary, a cyclopædia, a biblical dictionary, or a book of travel; whether written in Germany, France, England, or America; we find references to these *Biblical Researches*. They are quoted, not indeed as infallible, but as authority of the highest rank.

It is worth our while to consider for a moment what were the prominent traits of Dr. Robinson's mind, which gave to the results of his researches such a high value. Foremost among these were his indomitable perseverance, and what may be called his severity of investigation. It was not his habit to make up his judgment on a matter till he had learned all about it that was under present circumstances accessible. He did not take alleged facts upon trust, but sifted them thoroughly for himself. His investigations were comprehensive also. They covered the two fields of personal observation and learned research. Some writers on biblical geography do all in the study. Their authority cannot of course rise above its sources; and for want of personal observation they are often betrayed into wrong combinations of facts and wrong judgments. There are others who may be trusted to narrate what they have themselves seen, but whose opinions on questions involving historic research are of no value. But Dr. Robinson was both the careful observer and the learned investigator. Think of him and his companion riding through the desert of Arabia Petraea day after day, with compass before them and watch in hand, carefully noting at every turn of the road the time and change of direction. Think of the same two men crawling through the subterranean passage, 1750 feet in length, that connects the fountain of Siloam with that of the Virgin, that they might verify the fact of their connection. For examples of his thorough research in the line of history, one has only to read what he says of such places as Jerusalem, Hebron, and Tyre. He was not simply a scholar, nor simply an observer. He was a learned observer.

Another equally prominent trait in Dr. Robinson's character was a clear and comprehensive judgment. Not only was he indefatigable and severely accurate in the collection of facts from both history and observation, but he knew how to make use of them in the formation of opinions. There are books which may be fitly characterized as vast storehouses of facts, which, nevertheless, their authors were unable to turn to any good account. We value them for the data which they furnish, rather than for any opinions which they express based upon these data. But Dr. Robinson had a remarkably clear and penetrating apprehension of the bearing of the facts which he had collected upon the questions which he was investigating. Hence the verdict of the learned world, that his judgments, though they may be in particular cases erroneous, are in the main remarkably distinguished for solidity and correctness, and that in all cases they are worthy of the highest consideration.

The failings of Dr. Robinson were in the line of his excellencies. He was both cautious and confident in his judgments. His opinions were the result of mature investigation; he had learned from experience to rely upon them as correct, and it is not wonderful that he was sometimes uncomfortably tenacious of them. In controversy he did not always appreciate the arguments of his opponents, or treat them with the consideration which they deserved.

His character as an instructor grew immediately out of his character as a man and a scholar. Severely accurate and indomitably persevering in his own investigations, he could not tolerate looseness nor indolence in his pupils. Perhaps he did not always make due allowance for minds originally cast in a different mould from his own. With him the object of pursuit was truth naked and unadorned. For digressions and side questions he had no taste. In this respect he differed widely from Prof. Stuart. Some of the happiest efforts of that remarkable man in the lecture-room were, as is well known, what might be termed *excursus*, in the literal sense of the word. But Dr. Robinson adhered rigidly to the subject before him. The student who attempted an *excursus* with him was in danger of being stopped in a way that he would always remember. Perhaps he would bring the text-book up to his eyes, remarking in a dry tone, "I find nothing of that here." All whose object was simply the investigation of truth found in his lecture room abundant satisfaction. But if any came with the expectation of being entertained by brilliant flights of fancy, they were sure to be disappointed. Had he united with his remarkable fullness and accuracy as a teacher somewhat more of the genial element, and introduced into his writings a little more of the imaginative, then in him would have been realized the words of the poet:

Omne tulit punctum, qui miscuit utile dulci

During the last years of his life, Dr. Robinson had on hand a Geography of the Holy Land. To all biblical scholars it must be a source of deep regret that he has

left this unfinished. In a letter to me, dated January 28th, 1859, he spoke in a desponding way of his inability to work, arising from the state of his health, which had been broken by two fevers in two successive years; adding that, if called upon to labor or write for even an hour, he was wholly exhausted; that he had no desire, no heart for work; and whether the power would ever return was known only to God. That winter and the preceding he had escaped the fever, and his health gradually improved, so that afterwards he was again able to perform some labor, and his friends cherished the hope that he would yet complete his last undertaking in behalf of sacred literature. But such was not the will of God. He has gone, but his works remain an invaluable treasure to Christendom. Others may hereafter go beyond him, but it will be by availing themselves of the precious results of his unwearied toil in the department of biblical learning.

Dr. Pickering, of Boston, referred to the evidence which had come under his notice, in far distant countries, of the value put upon Dr. Robinson's works in aid of Biblical interpretation.

Dr. Beck, of Cambridge, gave an account of his early acquaintance with Dr. Robinson, commencing with the latter's application for information respecting the means of study in Germany, in anticipation of his first visit to that country. He farther spoke of his eminent qualities as a scholar, especially of his exceeding thoroughness, and complete mastery of everything he undertook.

Prof. Salisbury's proposal of a Committee to prepare resolutions having been accepted by the Society, the presiding officer designated Prof. Salisbury, Prof. Barrows, and Prof. Proudfit of New Brunswick as members of that Committee. They reported the following resolutions, which were unanimously adopted:

Resolved, That the American Oriental Society has been bereaved, by the death of Dr. Edward Robinson, its late President, of an associate and officer on whom it greatly depended for support and direction, and whose distinguished abilities and fame have contributed to gain for Oriental studies the favorable regard of men of culture in this country, and added much to the good name of the Society abroad.

Resolved, That the Corresponding Secretary be requested to communicate the sentiments of the Society, as above expressed, to the family of our late President, and to publish them in our Journal.

The Corresponding Secretary called attention to the recent death of another member, Dr. Convers Francis, of the Harvard Theological Seminary, Cambridge, who had for some years been a never-failing attendant at our annual meetings, and by his presence, his communications, and the part he took in our discussions, had added greatly to the pleasure and profit we had derived from them. He hoped that some of those that knew him best would not let the occasion pass without paying the merited tribute to his worth.

Prof. Peabody, of Cambridge, then rose and gave an account of the life and services of Dr. Francis, his acquirements as a scholar, his merits as a teacher, and the leading features of his intellectual and moral character:

Rev. Dr. Francis was graduated at Harvard College in 1814. His professional life was almost equally divided between a pastorate at Watertown and the Chair of Pulpit Eloquence and the Pastoral Care at Cambridge. As a parish minister, he enjoyed, to a degree seldom exceeded, the respect and affection of his flock, and the distinguishing regard of the surrounding community. Assiduous and affectionate in the private duties of his charge, grave, wise, serious, and earnest as a preacher, and endowed with rare versatility and affluence in the colloquial discussion of weighty themes, he was not only chosen by the electing board of the University,

but designated by the favoring suffrages of a large portion of his clerical brethren, as the successor of the late Henry Ware, Jr., who had been constrained by the failure of health to resign his professorship.

In his new office he was distinguished by conscientious diligence, uniform amenity of intercourse with his pupils, and the constant endeavor to elevate the prevailing standard of theological and general scholarship among the clergy under his influence. In his wider social relations he had many strong friends, and no enemies. Warm in sympathies, broad and comprehensive in charity, zealously interested in all worthy philanthropic enterprises, he embraced every mode of usefulness in which he could serve the community as the Christian citizen. For many months before his death, his countenance gave too certain presage of fixed disease and rapid decline; but he hardly remitted his full measure of active duty while consciousness lasted. He met his classes at his own house till within a week of his death. At the close of the first day on which he had been willing to deem himself too ill to work, he sank into a comatose state, and thence, four days later, into painless dissolution.

Dr. Francis was preëminently a student, and that for his entire life. Close as was his fidelity as a pastor, he found time for extensive and varied acquisitions, and he then commenced the collection of his large and curious library, which contains, it is believed, a greater diversity of rare books, in proportion to its size, than any other library in New England, and which bears in almost every volume traces of its owner's mastery of its contents. He was among the earliest of our divines to become conversant with the German language, literature, and theology. He had an ever-hospitable mind, held his opinions always subject to revision, his views open to new light. Hence, with firm and operative faith in great principles and fundamental truths, there was an aspect of indecision and vacillation with reference to many of the important subjects of controversy in philosophy and theology. He had, morally, the utmost firmness and tenacity in maintaining the ground once deliberately taken, and was always ready to make personal sacrifice for the right and the true; but on a subject on which it was possible for him to read and study more he seemed unwilling to let his mind seek even a temporary repose. He felt that it was treason to the truth to utter even a provisional verdict in an issue in which there were new advocates on either side who claimed a hearing.

As a teacher, his affluent learning enabled him to direct the researches of his pupils with precision and skill, and no man was ever more generous than he in imparting all that was in his own mind, while his library, with his own careful references, was always freely open to the student. If there was any fault in his instructions, it was the excess of wealth. He poured out more materials for thought than either he or his pupils could arrange into system—pearls unstrung, and more than they had time to string. But as a helper to the zealous and faithful student, as an example of unwearying intellectual toil, and of candor and impartiality in judgment, and as a genial inspirer of devout feeling and high Christian purpose, he has left a precious memory in many hearts, and still lives, we trust, in many lives that have been made worthier and more useful by his influence.

Rev. Mr. Brigham of Taunton, and Rev. Mr. Clarke of Jamaica Plain, former pupils of Dr. Francis, followed with remarks in the same strain, and with anecdotes illustrative of his character.

The deaths, which occurred or were first heard of during the past year, of Prof. R. Elton, Dr. E. McGowan, Rev. D. C. Scudder, and Prof. G. W. Freytag, Corresponding or Honorary Members of the Society, were also announced. Rev. Mr. Hale and Mr. Stoddard of Boston, and Dr. Taylor of Andover, spoke of the loss which both the missionary work and science had sustained in the untimely decease of Mr. Scudder, so soon after his entrance upon his labors in Southern India, referring with admiration to the unusual zeal and thoroughness with which he had taken up the study of India in preparation for his profession, as witnessed by several truly profound and valuable essays which he had published on Indian ethnology and philosophy before leaving this country.

The election of officers for the ensuing year being next in order, the following board, nominated by a Committee appointed by the presiding officer, was balloted for, and elected without dissent:

<i>President</i> —Prof. EDWARD E. SALISBURY,	of New Haven.
<i>Vice-Presidents</i> { Prof. CHARLES BECK, Ph. D.,	" Cambridge.
Rev. WILLIAM JENKS, D. D.,	" Boston.
Pres. T. D. WOOLSEY, D D., LL.D.,	" New Haven.
<i>Corresponding Secretary</i> —Prof. W. D. WHITNEY,	" New Haven.
<i>Secr. of Classical Section</i> —Prof. JAMES HADLEY,	" New Haven.
<i>Recording Secretary</i> —Mr. EZRA ABBOT,	" Cambridge.
<i>Treasurer</i> —Mr. D. C. GILMAN,	" New Haven.
<i>Librarian</i> —Prof. W. D. WHITNEY,	" New Haven.
Rev. RUFUS ANDERSON, D. D.,	" Boston.
Mr. J. G. COGSWELL, LL. D.,	" New York.
<i>Directors</i> { Prof. W. H. GREEN, D. D.,	" Princeton.
Prof. J. J. OWEN, D. D.,	" New York.
Prof. A. P. PEABODY, D. D.,	" Cambridge.
Dr. CHARLES PICKERING,	" Boston.
Prof. JOHN PROUDFIT, D. D.,	" New Brunswick.

Prof. Salisbury expressed his great unwillingness to assume the place to which the Society had thus designated him, and asked for time for consideration, before he should accept or decline it. The following morning he communicated his acceptance of the office, "yielding up to the judgment of others his own convictions of what would be for the interest of the Society, with a sincere desire to render it such service as he might be able."

The following communications were presented, the first three at the afternoon and evening meeting in Cambridge, the others Thursday forenoon, in Boston.

1. On the Karaites, by Rev. Charles H. Brigham, of Taunton, Mass.

This paper gave a general view of the sources, the development, the leading teachers, and the influence of the sect of the Karaites.

The name of the Karaites is derived from the Hebrew *kārā*, to read or recite, and expresses their character as adherents of the *text* of Scripture. The flourishing period of the sect was from 750 A.D. to 900 A.D., after which, chiefly through the strong opposition of the great Rabbīn, Saadia ben Joseph, they rapidly declined, and have never since regained the position even of a formidable heresy. In its leading tenets and its characteristic ideas, Karaism was a revival of Sadducism, differing from Sadducism chiefly in holding to the doctrine of a future life. The way of it was prepared: 1st, by the sect of the Sadducees, the close opponents of all Pharisaic traditions and glosses; 2d, by the Masoretic speculations of the 6th century; 3d, by the Jewish physicians, who made the sacred text the basis of their inquiries; 4th, by the false prophets and Messiahs, who appeared in the first half of the 8th century; 5th, by the isolated tribe of the Banu Musa, by some supposed to be the descendants of the captives of the kingdom of Israel.

The immediate founder of the Karaitic sect was Anan ben David, the grandson of the Exilarch Chasdai, who lived from 700 to 765, at Basra, Bagdad, and Jerusalem. He was a Rabbīn of great learning, and a ruler of extraordinary skill and persuasive power. His principal successors were Malich ben Harmala, Benjamin Nahawendi, Daniel el Kumasi, Bochtan, Judghan, Meswi and Ismael of Ochar, and Meswi of Baalbec. Eldad ha Dani the traveller, and Chawi el Balchi the free-thinker, may also be reckoned as belonging to the sect. All these flourished before the 10th century.

The general tenets of the Karaites, as contained in the writings of Anan and his successors, and as learned from the Arab historians, are the Unity of God, the Justice of God, the right of reason to interpret Scripture, the freedom of the human will, and the separation of God from all direct influence in human affairs. Jesus and Mohammed were both admitted to be prophets of God. The Talmud was wholly rejected. Of the practical heresies of the sect, the chief were the alterations made in the calendar and in the arrangement of the Jewish feasts, and the almost ascetic rules of personal morality and decorum. The claim of all teachers to a respectful hearing, the duty of free inquiry, and the duty of missionary labor, were positively enjoined. The most important duty, however, of the Karaite was to show and explain the text of Scripture. The followers of Anan did not conform their views to his in all respects, and there were numerous sects within the sect. In some instances it was joined with political fanaticism. Its chief seat was at Jerusalem, but in a century from its foundation it had spread into many distant lands, to Morocco, the Crimea, and Persia, and had branches in the principal cities of Western Asia. Its teachers were zealous, indefatigable, given to controversy, and generally pure in their lives. They were fiercely opposed by the Rabbins, and not favored by the secular powers. Anan himself was virtually an exile in Jerusalem.

2. On Bekker's Digammated Text of Homer, by Prof. James Hadley, of New Haven.

After alluding to the unfortunate attempt of Payne Knight in his *Iliad* (London, 1820), to restore the lost digamma, Prof. H. described the services rendered by Immanuel Bekker to Homeric criticism, referring particularly to his Homeric researches, printed, since 1857, in the *Monatsberichte* of the Berlin Academy. His edition of Homer in 1843, while it showed a marked advance on that of Wolf, followed essentially the same method, aiming in general to reproduce the text constituted by Aristarchus. But in his recent edition (Bonn, 1858), he has avowedly taken up a new principle—that of analogy—and, by the help of it, has sought to go back beyond Aristarchus. At the same time he has introduced the digamma, but with evident caution, abstaining almost wholly from violent or arbitrary changes of the text. He recognizes only an initial digamma, but retains it in cases where by a prefix or by composition it is brought into the middle of a word. Having determined from the indications of the verse what words should have digamma, he applies it to those words, wherever the verse allows it, or can by easy changes be made to allow it. Before noticing particular words, Prof. H. adverted to the cases in which hiatus was allowed in the epic verse, and which therefore give little evidence of a digamma. He also referred to the fact proved by Ahrens (in Kuhn's *Ztschft.*, x. 60 ff.), that for words which are clearly digammated in Homer, the proportion of unconformable cases (where the verse, as it stands in the common text, or after rejecting a movable *v*, forbids the digamma) does not usually exceed 7 or 8 per cent. He then showed that ἰσάμεν, 'to guard,' ought not to have been written by Bekker with digamma, the unconformable cases being about 40 per cent, while for the middle or passive of ἰσάω, 'to draw,' they are not more than 5 per cent. He objected to the procedure of Bekker in prefixing digamma to augmented forms (like εἰδέν, ἀνέσσει, ἠδύαν) of digammated verbs; and also in omitting digamma from reduplicated forms of such verbs in many instances where the verse allows it. He considered the question whether, in accordance with the views of Curtius and others, Bekker should have recognized a primitive *y*-sound as having produced the same appearances with digamma in the Homeric verse. Such traces of initial *y* Curtius (*Grundzüge d. griech. Etymol.*, ii. 177 ff.) finds in ἰοῖκα, ἱμαί, and the relative stem (ἱ, ῥ, δ, ὤς, etc.); of which Bekker writes the first two with digamma, the last with initial vowel. It was shown, however, that Curtius's derivation of ἰοῖκα from the stem δῖκ (δείκνυμι, 'to show')—through the forms δῖκ, γῖκ, whence γῖγοικα—is open to strong objections and has little probability. That ἱμαί, 'to send,' is for *yi-ya mi*, 'to cause to go,' is highly probable: but in Homer this verb clearly began with a vowel, while ἱμαί, 'to long,' as clearly began with a consonant: it is, therefore, unsafe to identify the two. As to the relative stem—in which, according to some recent writers (Kuhn's *Ztschft.*, viii. 401 ff., ix. 320), *h* is for *v*, and that for *kv* or *sv*—the weak indications of a consonant in Homer favor the belief that *h* is for

y (cf. Sk. yas); though possibly ω s, 'as,' which presents frequent evidence of a consonant initial, may have begun with *v*. Again it has been supposed that some words in Homer show signs of a lost initial σ . Along with ξ s, he uses the earlier σ s; and in like manner, Ahrens (Kuhn's Ztschft., x. 65 ff.) maintains that along with the usual $\delta\lambda\eta$, $\iota\delta\varsigma$, $\iota\kappa\alpha\sigma\tau\omicron\varsigma$, he used the earlier $\sigma\upsilon\lambda\eta$ (*silva*), $\sigma\iota\omicron\varsigma$ (*suus*), and $\sigma\epsilon\kappa\alpha\sigma\tau\omicron\varsigma$. This view, though plausible, is still too uncertain to warrant the introduction of a σ into the text: but Bekker's writing of $\iota\delta\varsigma$ and $\iota\kappa\alpha\sigma\tau\omicron\varsigma$ with initial digamma is decidedly objectionable.

3. On the Muslim Doctrine of Predestination and Moral Responsibility, by Prof. Edward E. Salisbury, of New Haven.

In this paper are first brought together some expressions of the lyric muse of the Arabs, either pre- or early post-Islamic, which indicate the direction of the Arab mind, at that period, with respect to the opposite phases of belief based upon the consciousness of human efficiency, on the one hand, and the persuasion of a superhuman overruling power, on the other—showing that the early Arabs were bare fatalists, manifesting in their popular songs no spirit of reverence for personal divinities. Then follows an exhibition of the substance of the teachings of the Kurân on the subject of predestination, from which it appears that Muhammad no more denied human freedom than he predicated of God a sovereignty which embraces even the actions of men, both bad and good. The paper also embraces a translation and discussion of all the traditions of Bukhârî and Muslim which relate to the subject—confirming the view derived from the Kurân itself, that Muhammad held to freedom of the will in connection with belief in divine sovereignty. The remainder of the paper is devoted to a summary of the speculations on predestination of the Muslim theologians, down to the twelfth century, as set forth by Shahrastâni.

The whole paper is designed to serve as a contribution of materials for an historical exposition of the opinions held among Muhammadans respecting divine sovereignty and human freedom; with only incidental references to the genesis of the opinions brought into view in the hope, however, of facilitating inquiry, on this point, to those familiar with the history of philosophy among other nations, especially of the West.

4. A Sûfi Catechism, by Mehemmed Missiree, on the Tesavuf, or Spiritual Life of the Sûfis; translated from the Turkish by John P. Brown, Esq., of Constantinople: presented by Prof. Salisbury.

In a letter accompanying this paper, Mr. Brown writes as follows:

"I do myself the honor of sending you a little translation from a part of a Turkish manuscript which lately fell into my hands, on the Tesavuf, or Spiritual Life of the Soffecs, which I consider very interesting. So little is known—or, at least, so little has been translated—on this subject, that I believe this is almost unique, and will be read with interest by all Orientalists. It will form a part of the work on which I have been engaged now for some years, on Islammysticism, or an account of all the dervish sects, now almost finished."

The extract translated is in the form of questions and answers: it treats of faith as the foundation of the spiritual life, of the distinction between the Sûfis and common people; of the doctrines of the former respecting metempsychosis; of their sects; of their mystic use of amatory and convivial terms; of their peculiar vision of God, etc., etc.

Prof. Salisbury read parts of the translation, and added, in farther illustration of the character of Sûfism, extracts from Schmolder's *Essai sur les Ecoles Philosophiques chez les Arabes*, and from Tholuck's *Sufismus*.

In the discussion which followed the reading of this paper, Dr. Van Lennep gave an account of his own dealings with and observations upon the Moslem mystics or dervishes, setting forth especially their doctrinal liberality or disregard of creeds. Rev. Mr. Washburn, of Syria, spoke of Mr. Brown's intimate relations with the leaders of the mystics in Constantinople, and their assistance liberally afforded him in the preparation of his account of the sects, and thought his work, when published, would be of the highest authority and value.

5. On the Peculiarities of the Turkish or Osmanli Dialect, by Rev. Henry J. Van Lennep, D.D., Missionary in Turkey.

Dr. Van Lennep commenced with referring to the Turkish or Osmanli as a language still to an important degree in process of formation. Grammars, dictionaries, and a national literature are almost wanting as standards of speech. An illustration of the rapidity of change is found in the fact that, within the space of thirty years, several new or completely revised translations of the Scriptures have been found necessary. The writer described the field occupied by the language, and pointed out the modifying influences which had been at work upon the latter, resulting from the mixture of races, and the changing succession of immigrations and annexations in the empire. The amalgamation of races had been extensive and rapid, being greatly favored by the general adoption of Islam; since, in the East, political and social distinctions depend much more on religious belief than on descent. Christianity was likely to play an important part in determining the character and the language of the Osmanli people.

The most striking features of the Osmanli language were explained. The euphonic law of the harmonic sequence of vowels was fully set forth and illustrated, and was held to be much more elaborately developed and consistently observed here than in the ruder Tatar dialects. The formation of words was solely by means of suffixes, to the exclusion of prefixes. The condensation and precision attained were instanced by the forms of derivative conjugation, and by selected phrases, which were analyzed to exhibit their peculiarities of construction. The elegance of the cultivated dialect, especially as spoken by city ladies of the higher classes, was not easily to be surpassed. The imperfect Arabic alphabet had had a notable influence upon the form of the written language, as read by the learned. The Greek and Armenian modes of writing, especially the latter, suited much better the spoken tongue. Little of the literature was in the popular dialect, free from pedantic intermixture with Arabic and Persian.

6. The Tāittiriya Prāṭiśākhya, by Prof. William D. Whitney, of New Haven.

Without occupying the time of the Society by any detailed account of this work, which had already been sufficiently described in previous communications, Prof. Whitney stated that, being well supplied with manuscript material for its publication, he had so far advanced his labors upon it as to be able to promise its appearance in the next volume of the Society's Journal.

7. On the Kurdish Tribes of Western Asia, by Rev. William Clark, formerly Missionary in Armenia, now of West Brattleboro, Vt.

This essay contained the results, in part, of Mr Clark's own observations upon the Kurds, and experiences among them, during his residence of several years in their country, and in part, also, of his study of authors who have written upon them, and it was a complete summary of what is known respecting their country, race, manners and customs, and religious beliefs.

Mr. Clark first gave an account of the mountainous and romantic region occupied by the modern Kurds, describing its fastnesses and valleys, and the surprises which constantly meet the traveller there. He referred to the ancient history of the people, to their identity with the Carduchi described by Xenophon, and their unchanged character since his time, and to their claimed affinity with the ancient Chaldees; passing thence to their relations to modern Persian and Turkish history. Their language was evidently of Iranian stock, but its position in the family was not fully determined. Their number was one and a half to two millions; they were broken up into little tribes, headed by independent chiefs. Mr. Clark went on to depict their character and qualities, of which he took a highly favorable view, praising their independence, their hospitality, their well-bred and decorous manners, their treatment of their women, etc. Their music and dancing were made the subject of description. Their acceptance of Islam was shown to be but nominal, and their native superstitions were characterized.

8. On the Leyden and Berne Manuscripts of Petronius, and their Relations to each other, by Prof. Charles Beck, of Cambridge.

Of the two manuscripts to which this paper relates, both belonging to the class usually called *Vulgata* or *Vulgaria Excerpta*, the former in part fills a *lacuna* of the latter, and it is a theory advanced by Buchler, in his edition of the *Satyricon*, that they were both originally parts of the same manuscript. Dr. Beck enters into a detailed examination and comparison of the two, and arrives at the conclusion that the supposition of any such relation between them is questionable, and even very improbable.

9. On the more Prominent Characteristics of the Zulu Language, by Rev. Lewis Grout, lately Missionary in Southern Africa, now of Saxton's River, Vermont.

Mr. Grout illustrated, so far as the scanty time allowed, the striking characteristics of the family of South African languages to which the Zulu belongs. The peculiarity of their phonetic system consisted in the employment of the three kinds of clicks, dental, palatal, and lateral, as constituents of the alphabet. These were often of onomatopoeic origin, and were as essential parts of the spoken language as any of the consonants. As regards the formation of words, the prevalence of preformatives and changes at the beginnings of words was dwelt upon. The nouns were divided into declensions or classes, according to their initial changes, and it was shown how the adjective and pronoun inflections were varied to agree with those of the nouns, giving rise to a kind of alliterative concord, having syntactic, not euphonic, value. The great variety of the forms of the verb was finally made the subject of remark.

The time of adjournment of the morning session having arrived, it was concluded to defer till another occasion the presentation of the two or three papers still remaining upon the docket, and to close the meeting. Accordingly, after passing a vote of thanks to the American Academy of Arts and Sciences for kindly granting the use of its room as the place of meeting, the Society adjourned, to come together again in New Haven on Wednesday, October 14th, 1863.

Proceedings at New Haven, October 14th and 15th, 1863.

According to appointment, the American Oriental Society assembled in New Haven, at the Hall of the Brothers in Unity, Alumni Building, Yale College, on the afternoon of Wednesday, October 14th, 1863. The chair was taken by the President, Prof. E. E. Salisbury of New Haven, and the meeting called to order, soon after 3 o'clock.

The Recording Secretary, Mr. Ezra Abbot of Cambridge, read the minutes of the last meeting, which were accepted, with the addition of a note marking as erroneous the announcement made to that meeting of the death of Prof. R. Elton.

The Committee of Arrangements announced the proposed order of business of the present session, as follows: that the Society should adjourn at or about 6 o'clock, to give the members an opportunity to accept the invitation kindly extended to them to take tea at the President's, and to meet socially in the evening, with their ladies, at Prof. J. M. Hoppin's, in Hillhouse Avenue; and that the literary sessions should be resumed at 9 o'clock on Thursday morning, and should continue through the day, with a recess at noon. These arrangements were, on motion, ratified and accepted by the Society.

The Directors announced that they had fixed upon Wednesday, May 18th, 1864, as the time of holding the next Annual Meeting in Boston, and had appointed Dr. Beck, with the Recording and Corresponding Secretaries, a Committee of Arrangements for that meeting. They further proposed and recommended for election to membership in the Society certain gentlemen, who were thereupon balloted for and declared duly elected. Of these, were elected as Corresponding Members

Prof. Edward B. Cowell, of Calcutta,
Prof. Friedrich Spiegel, of Erlangen.

The Corresponding Secretary, Prof. W. D. Whitney of New Haven, presented the correspondence of the past half-year. A large number of letters of regret and excuse, from members prevented by other engagements from being present at the meeting, were offered. Also, letters intimating acceptance of corporate membership, from

Mr. William B. Atkinson, of Cambridge,
Prof. Thomas Chase, of West Haverford, Pa.,
Prof. Ephraim W. Gurney, of Cambridge,
Pres't Thomas Hill, D.D., of Cambridge,
Prof. Wistar Hodge, of Princeton,
Prof. James R. Lowell, of Cambridge,
Dr. Leonard Tafel, of St. Louis,
Prof. Rudolph L. Tafel, of St. Louis,
Mr. Lyman R. Williston, of Cambridge;

and of corresponding membership, from

Rev. Isidor Loewenthal, of Peshawur, N. W. India.

Other letters conveying acknowledgments of receipt of the Society's publications and announcements of books sent to the Library, and some

containing items of literary intelligence from correspondents abroad, were presented and read in part.

Communications were now called for, and the following were offered, the first two on Wednesday afternoon, the others at the forenoon and afternoon sessions of Thursday:

1. A Letter addressed to James W. Redhouse, Esq., of London, by Rev. W. G. Schauffler, D.D., of Constantinople, in vindication of the latter's Specimen-version of the Gospels and Acts in Turkish; laid before the Society, with permission of the Corresponding Secretary of the American Bible Society, by the President.

Prof. Salisbury remarked, by way of introduction to the letter, that the translation of the Scriptures into languages of the East must necessarily be a matter of interest to the Oriental Society, inasmuch as it is the noblest application which can be made of the treasure of words and forms of speech in any language, to seek to translate into it both the form and spirit of that richly diversified body of literature which composes our Sacred Book; that one's command of a language could be brought to no severer test than such an application of it; and that, therefore, this Society might well congratulate itself that many of its members have been distinguished in so high a sphere of labor. He then briefly referred to the new Arabic translation of the Scriptures, by Dr. Eli Smith and Dr. Van Dyck, to the Chinese version, lately completed by Dr. Culbertson, to which our lamented associate Dr. Bridgman had given many of the best years of his life, and to Dr. Goodell's translation of both Testaments into the Armeno-Turkish, "the third revision of the Old, and the fourth of the New," the printing of which has been lately finished—but disclaimed the intention of even alluding to all the works of this sort in which the Society might be expected to feel a special interest. He further remarked that, in communicating Mr. Schauffler's letter, he did not at all mean to enter into a discussion of the points brought forward, but wished only that the Society should have the gratification of learning with what an enlightened and candid, as well as reverent, spirit their esteemed associate is pursuing his delicate task.

Dr. Schauffler's letter not being the property of the Oriental Society, nor written for publication, it is not thought proper to give any detailed abstract of it here. His version of the Gospels and Acts was issued in 1862, "to try its fortunes, and to elicit the opinions of competent judges."

Rev. Oliver Crane, missionary in Turkey, added to this communication some remarks upon the characteristics of the two Turkish versions, by Mr. Goodell and Mr. Schauffler, the former being designed for the mass of people of little culture, and the latter for the literary men of the Turkish empire, each was admirably adapted to its purpose, but Mr. Schauffler had perhaps aimed at somewhat too high a style. He also spoke of Mr. Redhouse's Turkish style as very elegant, but as sacrificing something of accuracy in translation from the Scriptures, and the more because of his ignorance of Hebrew and Greek; and he improved the occasion to enforce the importance to a missionary of being thoroughly versed in the original languages of Scripture, and also of taking full time to acquire the most familiar acquaintance with a language, before attempting to translate the Scriptures into it.

Dr. A. H. Wright, missionary at Orumiah, being called upon, next rose and gave a brief account of the new edition of the Modern Syriac version of the New Testament, now going through the press under his care in New York. It is, like its predecessors, made from the Peshito, but with all the important variations of the Greek original wrought into the text, instead of being given in the margin. Being intended in part to replace by something more convenient and portable the cumbrous volumes already published, it is printed in a new type of small size, which will allow of putting the whole Testament into a pocket-volume of six hundred small 18mo pages. Specimens of the work were shown to the members present, and elicited much admiration.

2. On Müller's Views respecting the Relation of the Hindu and Chinese Asterisms, and respecting other Points in Hindu Astronomy and Chronology, by Prof. William D. Whitney, of New Haven.

This was an addition to Prof. Whitney's paper on the views of Biot and Weber respecting the same subjects, presented to the Society a year ago, and it was to be printed along with that paper in the next Number of the Society's Journal. It had been prepared for presentation at the last Annual meeting, in May, but was crowded out at that time by the press of other matter. The views of Prof. Muller which it stated and criticized are contained in his Preface to the fourth volume of his edition of the Rig-Veda and its commentary (London, 1862). Prof. Whitney first objected to Muller's introduction to the discussion, as urging considerations bearing upon the charm of Vedic literature, and the superiority of Indo-European national individuality, which were irrelevant to the treatment of a purely historical question, and also betrayed an exaggerated estimate of the results which would follow from admitting the Chinese origin of the system of lunar asterisms. The grounds on which the originality of this system in India was maintained by Muller were pronounced untenable; they implied a view of its character—as composed of merely theoretic divisions of the heavens, instead of constellations, and divisions as pointed out and determined by them—which was erroneous only by such a misunderstanding could he, while admitting all Biot's claims as to the originality of the Chinese *sieu*, escape from Biot's inference of the derivation from them of the *nakshatras*. The scheme of definitions of the word *nakshatra*—which, though put forward as a postulate, really involved the whole matter of controversy—was opposed on both philological and historical grounds; the determination of the time of selection of the junction-stars of the asterisms, and the assumption of the identity of this time with that of the establishment of the asterisms themselves, were proved erroneous; and the explanation of the addition by the Hindus, under Chinese influence, of a series of star-groups to their former system of divisions of the ecliptic, was shown to be insufficient. The relations of the year and month, and the value of the periodical month as a chronological element in India, were discussed, and in respect to the latter point, as well as to certain others, it was claimed that Muller had done injustice to Weber. To Muller's view respecting the date yielded by the Jyotisha's position of the solstices, and the use to be made of it, Prof. Whitney entirely assented. He then took up the points cited by Muller from Bentley, as worthy of more attention than they had received, and endeavored to prove them altogether destitute of value. Bentley's date for the adoption of the names of the months depended entirely upon his assertion that the month *Çravana* always began at the summer solstice, which was gratuitous and false; his explanation of the asterismal names of four of the planets, as founded upon occultations of those planets observed by the Hindus in the year 1424 B. C., was first refuted on philological and general grounds, and then shown to be utterly annihilated by the calculations made for Muller himself by Mr. Hind, which proved that but one, if even one, of the four asserted occultations actually occurred—although Muller unaccountably regarded the calculations as supporting Bentley's explanation, the latter's interpretation of the name *Viçakhā*, and his deduction from it of the age of the system of asterisms, were stigmatized as a mere etymological conceit, unworthy of serious consideration. Muller's partial rehabilitation of Bentley was therefore pronounced a disservice to Hindu archaeology, calling for a retraction. Finally, Prof. Whitney pointed out that Colebrooke's determination of the age of Brahmagupta by calculations founded on the latter's definition of the position of certain junction-stars of the asterisms, quoted by Muller, was invalid such calculations could only prove the time of the general observation of the positions of the junction-stars, which were reported by Brahmagupta accordantly with the other Hindu astronomical authorities.

3. On Dr. Legge's New Edition and Translation of the Chinese Classical and Sacred Books,* by Mr. Ezra Abbot, of Cambridge.

* The Chinese Classics: with a Translation, Critical and Exegetical Notes, Prolegomena, and Copious Indexes. By James Legge, D.D., of the London Missionary Society. In Seven Volumes. Vol. I., containing Confucian Analects, the Great Learning, and the Doctrine of the Mean.—Vol. II., containing the Works of Mencius. Hongkong: at the Author's. London. Trubner & Co. 1861. Large 8vo. pp. xiv., 186, 376; viii., 126, 497.

Mr. Abbot gave a succinct account of the *Five King* and the *Four Books*, which together constitute the sacred and classical literature of China, stating the date, authorship, and character of each, and detailing the editions and translations hitherto made and published for the use of Europeans, with a brief estimate of their value. This led to the more proper subject of the communication, Dr. Legge's new edition of the whole body of these works. Dr. Legge was an English missionary in China, of about twenty-five years' service: he had planned his present work soon after his arrival in the country, and had ever since been preparing for its execution, by the collection and study of the voluminous Chinese literature bearing upon and connected with the books in question. An English merchant, Mr. Jardine, recently deceased, had provided for defraying the expenses of the work; another, Mr. Dent, had arranged that it should be furnished to missionaries at half-price. Two volumes, containing the *Four Books*, had already appeared, and were submitted to the examination of the members present. Their form was royal 8vo; the Chinese texts were given at the head of each page, with the English version next below, and critical and explanatory notes at the bottom. The paper and typography were of the best quality, and the whole mechanical execution did honor to the press at Hong-kong from which the work issued, and the Chinese workmen employed in producing it. Each text was preceded by an elaborate introduction, explaining its history, doctrine, etc., and sometimes containing the text and translation of other works which it referred to or controverted. Full indexes followed, English and Chinese; the latter were accompanied with definitions, and served as complete special glossaries to the texts, with abundant references to passages and explanations of phrases. The whole was likely to occupy eight or ten volumes, and would be one of the most important and valuable contributions ever made to Chinese philology. Mr. Abbot read extracts exhibiting Dr. Legge's style of translation, comparing it with that of other translators; showing also, from the discordant renderings of one or two passages, the danger of building general conclusions on particular sayings, which might be of doubtful meaning or misunderstood. He proceeded further to remark upon the character of Chinese ethics, and to illustrate it by reading a number of citations from Dr. Legge's versions of the different texts.

Rev. E. W. Syle, late of the Shanghai mission, explained, by a description of the Chinese system of education, and of literary examinations necessarily undergone by the aspirant to civil office, the manner in which these books still exercise an immense influence upon the Chinese mind. Their present authorized comment and interpretation, with and by which they were studied, was of a decidedly pantheistic character; and it was one of the objects of Dr. Legge and of those who labored with him to set forth and urge the purer meaning which actually lay in the texts themselves and had been brought out in the older commentaries, and which much more distinctly favored monotheistic doctrine.

4. On Ritschl and Mommsen's New Corpus of Latin Inscriptions, by Pres't Theodore D. Woolsey, D.D., of New Haven.

By way of preface to his account of the great work undertaken under the care and patronage of the Berlin Academy, of publishing in a body all the known Latin inscriptions, Pres't Woolsey mentioned and briefly characterized the partial collections of such inscriptions hitherto made public. He gave also a general exposition of the subject of epigraphical monuments in the classical languages, pointing out the sources of their value, giving some details respecting their number and distribution, and describing more particularly a few of the most celebrated and important among them. He finally explained the plan of the present collection, and its division between the two editors to whom it was entrusted, and spoke of their merits and qualifications for the task they had undertaken. Ritschl's elegant and costly first volume of *fac-similes** was exhibited to the meeting.

Mr. Brewer, of New Haven, called attention to the promising field for exploration and discovery of monuments in the north-western portion of Asia Minor. Rev. Mr. Crane spoke briefly of the abundant ruins, yet in great measure unexplored, lying between Antioch and Aleppo, describing the aspect of some of them.

* *Priscæ Latinitatis Monumenta Epigraphica*, etc. Berlin, 1862. fol.

5. Dr. J. Perkins's Translation of an Ancient Syriac Manuscript, containing a Version of the Apocryphal Revelation of St. Paul; presented by Prof. George P. Fisher, of New Haven.

The manuscripts containing this apocryphal work were first sent to America some years ago, by Rev. David T. Stoddard, but had been recently in the hands of Dr. Perkins of Orúmah for translation, and were quite lately returned to this country. Dr. Perkins says respecting them: "The Syriac is so good that I am inclined to give it the credit of considerable age. We seldom see so good a style written by the best Nestorian scholars of the present time."

Prof. Fisher stated that the translation had been but a day or two in his possession, and that he had had no time for anything but a superficial examination of it. The well-known passage in St. Paul's second epistle to the Corinthians, speaking of his being taken up into heaven, and beholding there things not to be disclosed, suggested a tempting subject to makers of apocryphal books, and a number of professed revelations of what the apostle saw in that vision were known to have existed in various parts of the Christian world. Two or three such are spoken of by Fabricius, the chief authority respecting this class of literature. One, dating from the latter part of the fourth century, purports to have been buried by Paul in the foundation of his house at Tarsus, and to have been found and brought to the emperor Theodosius by its later occupant, guided to it by a vision. Another, supposed less ancient, existing in a Latin manuscript in Merton College library at Oxford, is said to include a visit to hell as well as to heaven. The work under discussion contains both these features, how much besides it may have in common with those other works, as perhaps descended from a common original with one or both of them, it was as yet impossible to say.

After a recent introduction, inculcating its genuineness and importance, the work commences with representing the sun, the moon and stars, and the earth, as successively accusing to God the sinfulness of man, and calling for his punishment; then the guardian angels, who attend the steps of mortals, and each evening report in heaven all their good and evil works, declare the righteous everywhere in affliction, and the wicked totally corrupt. Next begins the revelation. Paul is caught up into heaven, he sees on the way the two classes of angels appointed to receive the souls of the wicked and the righteous, and asks and obtains from his heavenly conductor the sight of their execution of the duty entrusted to them—the conveyance of the righteous souls to heaven, in spite of the opposition of evil spirits on the way, and the bringing of the soul of a wicked man to the presence of God in heaven, to receive condemnation, and to be handed over to the tormentors, until the day of resurrection. Paul then enters the third heaven, he sees Enoch and Elijah, describes the general wonders of the place, and is conveyed over the ~~Sea of the Euphrates~~ to the City of Christ. He is shown beyond it the prophets of the Old Testament, the children slain by Herod, and the patriarchs and hospitable entertainers; he returns to the city and gives other details respecting it; he hears David sing, and is informed of the necessity of singing David's Psalms in worship, he is told the meaning of *hallelujah*, and its indispensableness in pious responses, and so on. Then he is taken to hell, and beholds the torments of the wicked, among whose crimes adultery, misconduct in ecclesiastical office, usury, and misbehavior in church and at the sacrament, are especially dwelt upon. Michael, descending from heaven, is in vain appealed to for relief by the condemned, and God himself, appearing, confirms their doom. The apostle further meets with Moses, the chief prophets, and other Hebrew worthies, who lament sorely over the sins and sufferings of the wicked, and he is finally brought back to earth. The work closes with the account of its own concealment and discovery, already alluded to. It is written in a heavy style, and is deficient throughout in imagination, force, and point.

6. On Recent Discussion and Opinion respecting the Ionian Migration, by Prof. James Hadley, of New Haven.

Prof. Hadley referred to a former communication (presented in Oct. 1856, and printed in *Journ. Am. Or. Soc.*, v. 430-444), in which he described and criticized a dissertation, then recently published by Prof. E. Curtius of Gottingen, entitled "The Ionians before the Ionian Migration." Taking up and carrying out a view

which had been indicated by Buttmann and Niebuhr, Prof. Curtius maintained that there were Ionians settled on the coast of Asia Minor for many ages before the event which is commonly supposed to have brought them there, the Ionian Migration of about 1000 B. C.; and that the colonists from Attica in this Migration were only going back to a country which had been the home of their forefathers, and which was still the home of their kinsmen. After recapitulating the leading points in his former communication, Prof. Hadley gave an account of the discussions which have been excited in Germany by the theory of Curtius. He stated the objections of Schömann, Duncker, Bunsen, and Gutschmid, and the answers returned to them by Curtius and other supporters of his theory. It was observed that three arguments to which Curtius gave prominence in his first essay, viz—1. The wide diffusion of the Ionian name throughout the East as a common designation for the Greeks;—2. The supposed occurrence of the Ionian name on Egyptian monuments of the 18th and 19th dynasties;—3. The rapid progress in wealth, power, and literary culture, made by Ephesus, Miletus, and other Ionian cities, immediately after the Ionian Migration—that these arguments are no longer relied upon as supports to the theory. The theory itself has received an important modification, through the views proposed by Classen and adopted by Curtius, in reference to the rise and progress of the Ionian name. It is assumed that this name was first used by the Phœnicians (under the form *Yaranim*), and applied by them to the maritime tribes, whether Greek or not, who inhabited the coasts and islands of the *Ægean*; that the Greeks of Europe learned the name from the Phœnicians, and used it to designate the colonists who were then coming across the *Ægean* to settle on their coasts; that these colonists adopted it for themselves, and, having thus a new name, forgot the fact of their derivation from Asia; and that the name was not established in Asia Minor until the emigrants from Europe brought it there about 1000 B. C. It was shown that these assumptions relieve the theory of Curtius from some very serious objections; but in other respects they weaken the argument in its favor, and they cannot supply its lack of positive foundation. It is certainly not improbable that the colonists of the Ionian Migration found in Asia Minor tribes not widely different from themselves in language and ethnical affinities. But there is strong reason for believing that they did not find a population which they recognized as having the same nationality with themselves, as standing in a relation to themselves similar to that of the Achæans or Dorians in Greece. There is no reason to suppose that the earlier inhabitants of the Asiatic coast were any nearer to the Greeks than Curtius conceives the Pelasgians to have been; for he regards these as indeed distinct from the Greeks, yet closely resembling them, and readily coalescing with them into one people. In conclusion, Prof. Hadley protested against the claim of Curtius that his theory of early Greek times should be accepted unless a better can be substituted for it: a theory may be superior to its competitors, and yet, if it lack sufficient evidence, it must be regarded as plausible speculation rather than historic verity.

7. Arabs in Peking: from a letter of Rev. Henry Blodget to Prof. H. A. Newton of New Haven, dated Peking, Feb. 19, 1863; communicated, with remarks and explanations, by the President.

Prof. Salisbury first read an extract from Mr. Blodget's letter, as follows:

"I will enclose with this note a list of a few Arabic works, of which there are many in the mosques in Peking and throughout the country. The inmates of the mosques declare that they are the descendants of Abraham and of Ishmael, that they came from Mecca, and entered China a thousand years ago, under the Tang dynasty. They read, write, and speak the Arabic, but are not well versed in Chinese. The names of these books they wrote down at my request. They are opposed to idolatry in all its forms. The Koran has never been translated by them into Chinese, being regarded as too sacred. On this account their religion has made less progress in China, and has hardly become naturalized."

The enclosed list of titles is as follows (without the numbers):

عقاید الاسلام. 5. قدوری. 4. تلخیص المفتاح. 3. شرح کافیه. 2. ضوء المصباح. 1.

- مفتاح 10. مختصر كافى 9. معسودى 8. شرح الوفاية 7. كنز الدقائق 6.
 قلاستان 15. خطب 14. سراجية 13. ترغيب الصلاة 12. مجموع خاني 11.
 رباعيات 20. فوايح 19. لوابيح 18. مقامات 17. نداء الرسول 16.
 تفسير حسين 24. تفسير زاهدى 23. تفسير قاضى 22. اشقة اللغات 21.

It was remarked by Prof. Salisbury that, so far as he is aware, this letter reveals a fact hitherto unknown: namely, the presence of Arabs even in the capital of China, retaining their own language and religion, and possessing a literature; that relations are believed to have subsisted, in modern times, between China and any country of Western Asia marked by the presence of the Arab race and their institutions, by which this settlement of Muhammadan Arabs in Peking could be explained; but that their presence there may well enough be connected, agreeably to their own tradition, with the well-known maintenance of an active commercial intercourse between China and the empire of the Khalifs of Baghdád, in the eighth and ninth centuries, under the enterprising and tolerant Thang emperors. The hope was expressed that more definite information might be communicated to the Society, on some future occasion, throwing light on the question of the origin of this settlement: meanwhile, the list of books enclosed in Mr. Blodget's letter was referred to as capable of affording some hints respecting the matter. An analysis of the list was then given, to show, as far as possible, the authorship and age of the several works—thus partly limiting the time when they could have been obtained—and their subjects. Of the twenty-four works named, ten had not been identified, nor even their subjects determined; of the others, the character of five was recognizable: viz No 5, "Fundamental Principles of Islâm," No. 12, "Incitement to Prayer," No. 14, "Discourses," i. e. addresses delivered in mosques; No. 16, "The Messenger's (Muhammad's) Call," No. 20, "Quaternary Traditions," but their age had not been ascertained; the nine still remaining were: No. 4,

Kudûrî (the author's name: he died A.D. 1046), subject, Muhammadan law; No. 6, "Treasure of Subtleties," on Muhammadan law, by an author who died A.D. 1310; No. 7, "Commentary on the Wikâyah" (a commentary on the Hidâyah, which is of the 11th century), subject, traditional law, No. 15, "Gulistân," the well-known poem of the Persian Sa'dî, born in the 12th century, No. 17, "Makâmât," probably the famous work of Harîrî, who died A.D. 1122; No. 21, "Radiations of Splendors," a commentary on a philosophical work, by an author who died A.D. 1492; No. 22, "The Kâdhî's Commentary on the Kurân," by al-Baidhâwî, who died near the close of the 13th century, No. 23, "Zâhidî's Commentary on the Kurân"—perhaps of the 13th century, No. 24, "Husain's Commentary on the Kurân," written in Persian and translated into Turkish, of the 14th century. These details, derived from Hajî Khaltah's Lexicon, might be of some interest, at least for the evidence they afford of a living profession of Islâm, in our day, in the capital of the Chinese empire.

8. On the Relation of Language to the Problem of Human Unity, by Prof. Whitney.

The writer disclaimed any intention to treat this interesting theme in an original, or a profound and exhaustive, manner: he desired only to set forth plainly the well ascertained facts and principles of linguistic science as they bear upon it. In the recent varied investigations of the question of human unity, much aid had been looked for from this new science, which had thrown so much light upon ethnology; but he was of the opinion that the matter was beyond her ken: she could never hope to prove that man was either of one race or of more than one. The classification of languages by their resemblances, and the establishment of groups and families, was first illustrated. Languages are of every degree of kindred, from such slight local varieties as distinguish the speech of the different parts of our own country to such as separate English, Russian, and Hindu; but, whether nearly or remotely allied, if found to possess unequivocal correspondences, they are recognized as derived from a common original. The tie connecting those who speak them is also, in the main, one of blood, although not without exception, since language is

transmitted not by birth but by example, training, and education. The differences between related languages are due to the constant growth and change of every form of speech, necessarily producing diversity except within the limits of the same communities. The nature of these processes of growth was set forth, with some fulness. They all point to a beginning, to a primitive period when human speech was composed of monosyllabic roots, the actual germs out of which its completer forms have been developed. Families of languages are composed of such as have made in common some of the steps of this development—such as possess, at least in part, the same grammatical structure. The principal families—as the Indo-European, the Semitic, the Scythian, the African, the Polynesian, and the American—were pointed out, and their peculiarities briefly described. If the languages of these different families are akin, the signs of connection must be sought in the roots alone. But, as it is clearly supposable that men may have separated, though of a single family, before the growth of so much language as should leave recognizable fragments in more modern tongues, comparison of languages can evidently never prove men to be of diverse origin. That it also cannot prove the contrary is less obvious, but equally demonstrable. The difficulty of making out distinctly the roots even of the Indo-European family, whose history can be followed back for three thousand years, is extremely great. The obscuring effect of the processes of linguistic growth is very great, producing utter apparent diversity of form and meaning where there is genetic identity, and the contrary, as was illustrated at some length. And, in several of the families, only dialects of our own age are accessible for examination; analysis of them cannot yield with any confidence their ultimate radical elements. Scattering coincidences are of little value as evidence of relationship; they are always to be suspected of being the result of accident. The two best known families, Indo-European and Semitic, are not yet proved related by strictly linguistic evidence, and probably never will be so, to universal or general satisfaction; and if this is not to be expected with regard to them, it can never be even hoped for with regard to others. Linguistic science must confess that, before she reaches the comparisons necessary for establishing a kindred between families, the evidence on which she relies becomes too vague and uncertain to be trusted.

9. On the Indo-European Verb, by Dr. Leonard Tafel and Prof. Rudolph L. Tafel, of St. Louis, Mo.; presented by Prof. Hadley.

This was a very long and elaborate paper, setting forth, defending against objections, and establishing anew, the peculiar views of its authors upon certain important points in comparative philology, made public by them in earlier works and essays. It began with a direct reply to the criticisms of Prof. Schweizer, of Zurich, contained in Kuhn's Zeitschrift, Vol. xii. (Berlin, 1863), and passed over into a more general discussion, in which, however, the views of this authority and of Schleicher, in his Compendium der Vergleichenden Grammatik, were especially held in view. The points contended for by the Messrs. Tafel are thus summed up by them at the end of the discussion:

"1. There is but one fundamental form in the Indo European languages for the expression of the pronoun of the first person singular, from which all its oblique cases in all languages, the suffix of the first person of the verb, and also the plural form of this pronoun in all its acceptations, are derived. This original form of the pronoun is *akam*, which was afterwards weakened into *agam*, *agham*, etc.—2. The original tense in language is the strong (second) aorist, from which the imperative mood, and the present, imperfect, and future tenses in the subjunctive, indicative, and optative moods are derived on the one hand, and the perfect, pluperfect, and future perfect tenses in their respective moods on the other.—3. The first person of the present tense in the Indo European languages was not formed by the addition of *mi*, from which all other forms of the present tense ending in *am*, *om*, *o*, etc., are formed by abrasion, but *am* is the original ending, shortened from *akam*, *agam*, or *axam*.—4. The middle and passive voice in all Indo European languages, including the Sanskrit, Zend, and Greek, has been formed by the addition of the general reflexive pronoun, *s* (*sva*, *se*, or *sik*).—5. The long *e* in *leg-s-bam* is formed by contraction from *leg ei-bam*, *leg-es-bam*.—6. The character of the future relation in Latin is not expressed by *i* in *-bis*, *-bit*, as Bopp holds, but by the whole suffix, which, as well as *-bam*, is derived from *fi-o*, *fi-ω*, and expresses a growing, or becoming.—7. The

Latin ending *-imini*, of the second person plural in the passive voice and in deponent verbs, is not a participial form, but it stands originally for *imin-or*, *imin os*, in which *imin* is the Latin form for the Vedic *yusme*, Skr. [*yumam*] *yáyam*, Gr. *ἴμετες*, *ἴμετες*, and *os* expresses the reflexive relation.—8. As the Greek strong or second aorist is the original or primitive tense, it cannot be shortened from the imperfect tense.—9. The Greek augment is not a time-particle, but, according to Messrs. Buttmann and Thiersch, a shortened duplicated form.—10. The first aorist passive in Greek is formed by the addition of *va*, the first syllable of the participial form *va-ant*, to the verbal adjective ending in *τ*, e. g., *ἰ-τυτ-φα-αμ*; the final *μ* of the first person, as in Greek always, is weakened into *ν*, *α-α* is contracted into *η*, the digamma aspirates the preceding *τ*, this the *π*, and the digamma finally is lost. The second aorist is formed in the same way, only *va* is not added to the verbal adjective, but to the original verbal root, which is presented in the second aorist active: e. g., *ἰ-τράν-η*, from *ἰ-τράν-φα-αν*, the digamma being dropped without aspirating the preceding mute.—11. The Latin perfect in *vi* is not formed by the addition of *fu*, but arises from *va-im*, *ve-im*, *vi[m]*. In the Greek perfect the digamma passes into *ν*.—12. The primitive Indo-European imperative mood in the second person singular did not originally have the suffix of the person, it is, therefore, not formed from the present tense, but the present indicative is itself formed through the subjunctive from the imperative mood."

Some distrust of the arguments of the Messrs. Tafel, and dissent from their conclusions, was expressed on the part of two or three of the members present, but want of time and the absence of the authors precluded any extended discussion.

10. Comparative Tables of Words in Ten Languages, by Rev. Nathan Brown, D.D., formerly Missionary in Assam; presented by the Corresponding Secretary.

Dr. Brown had drawn up a table of nearly three hundred English words, to which he appended the equivalents in Ahom (Assamese), Khamti or Syan, Tie chu and Ning-po (Chinese), Japanese, Shubo (African), written and spoken Burmese, Khasia (Assamese), and Tusciora (American). A list of sixteen words was added, with equivalents in twenty "Southern Tatar" dialects, of Tibet, N E India, and Farther India.

Prof. Whitney pointed out the unscientific character of such comparisons as those made in the former list, and the impossibility that they should bring to light any other than accidental correspondences.

Dr. D. J. Macgowan's project of an Agricultural and Scientific Exploring Expedition to the countries of Southeastern Asia, to be undertaken by the United States Government, was, in accordance with the wishes of that gentleman, brought before the notice of the Society by Rev. Mr. Syle and the Corresponding Secretary. The latter stated that it had been Dr. Macgowan's intention to be present at the meeting, and to explain his plan in detail. After some discussion, it was decided that the Society was not at present sufficiently informed to be justified in advising and urging the undertaking of the expedition. Whereupon, upon motion, a Committee was appointed to receive explanations from Dr. Macgowan, and, should they think it desirable, to give the Society's sanction and recommendation to the scheme. Prof. Salisbury, Rev. Mr. Syle, and Prof. Whitney were constituted this Committee.

No further business being brought forward, the Society passed a vote of thanks to the Brothers in Unity of Yale College for the use of their hall, kindly granted for the convenience of the present meeting, and adjourned, to assemble again in Boston on Wednesday, May 18th, 1864.

ARTICLE VI.

NOTICE OF

كتاب الباكورة السليمانية في كشف أسرار الدبابة النصرية
تأليف سليمان أفندي الأذنى

THE BOOK OF SULAIMÂN'S FIRST RIPE FRUIT,

DISCLOSING THE

MYSTERIES OF THE NUSAIRIAN RELIGION,

BY SULAIMÂN 'EFFENDI OF 'ADHANAH,

WITH COPIOUS EXTRACTS.

By EDWARD E. SALISBURY.

Presented to the Society May 18th and Oct. 27th, 1864.

IN the year 1848, several original documents relative to the Nusairis were made known in the Journals of the Asiatic Society of Paris and the German Oriental Society, by extracts and translations, in which the festivals of the sect were enumerated, the origin of some of them was explained, a few Nusairian forms of prayer, or consecration, were given, and certain points of doctrine held by the sect were brought out in the form of a catechism. But from that time to the present nothing additional has been contributed to the elucidation of the subject. We take pleasure, therefore, in introducing to our fellow-orientalists the work whose title heads this paper, which appeared at Beirût the present year, though without any imprint of place or date, and will be found to be of the highest interest and importance with reference to Nusairian rites, doctrines, and history. It was written by a former member of the sect, according to the following statement made by our associate Dr. Van Dyck, missionary at Beirût, to whose courtesy we are indebted for copies of the work.

"This tract was written," says Dr. Van Dyck, in transmitting some of the sheets in advance of publication, "by a Nuseiry, who first doubted his own religion and became a Jew, then a Moslem, then a Greek, then a Protestant. He was taken as a conscript, and sent from Adana to Damascus, where he was released. He came to Beirût and wrote this tract. He then went to Ladikia, and remained some months with Rev. R. J. Dodds, missionary of the Assoc. Reformed Church; and then returned to have his tract printed at his own expense. I have left it pretty much as he wrote it, without attempting to reduce it to the rules of the language; nor have I had time to read the proofs. Some parts have been omitted for the sake of decency. —Beirût, Sept. 26, 1863."

Of the author we know nothing more than this, excepting by the tract itself, which seems to us, however, to bear internal marks of credibility sufficient to justify reliance upon its authority.

We propose, now, to exhibit the substance of this tract, following the author closely, for fear of losing something important of what he communicates. As to forms of expression, however, while freely using those of the author, we shall not be trammelled by them, only carefully preserving the phraseology where original formularies seem to have been drawn upon.* For the fuller satisfaction of orientalist, we shall introduce the text itself of all portions of the tract which appear to be taken from manuals of the sect, as well as of all leading terms and titles of office, and of all single passages in our author's explanations which seem to be of special importance.

The work before us is divided into sections: of which the first describes the author's initiation as a Nusairî, and embraces what purports to be a complete Nusairian prayer-book, with important explanations and historical notes; the second is chiefly an enumeration of some of the principal festivals of the sect; the third gives a detailed report of the ceremonies observed, and the liturgical forms used, on those occasions, and includes some statistics of the sect; the fourth treats of the important Nusairian doctrine of a fall from virtue and happiness in a pre-existent state; the fifth consists entirely of specimens of Nusairian poetry; the sixth is a statement, by the author, of certain fundamental principles of the sect; the seventh is a narrative of the circumstances under which the author discovered its deeper mysteries, of his own conversion, first to Judaism and then to Christianity, and of the treatment which he met with, in consequence, from his former co-religionists; and the eighth, which is the last, is wholly controversial, being an argument against the doctrines and rites of the Nusairîs.

The author begins by informing us that he was born at An-

tioch in A.H. 1250, or A.D. 1834-5, and lived there to the age of seven years, when he was taken to 'Adhanah; and that his initiation took place when he was eighteen years old, the appointed time being from the age of eighteen to twenty. The initiating ceremonies were as follows.

On a certain day there was a general gathering of high and low of the Nusairîs of 'Adhanah, "belonging, as we shall see, to that division of the sect which bears the name of Northerners, before whom he was summoned, and had presented to him a cup of wine. Then the Pursuivant (النقيب) took a place at his side, and said to him: "Say thou: 'By the mystery of thy beneficence, O my uncle and lord, thou crown of my head, I am thy pupil, and let thy sandal be upon my head'" — *بِسْمِ احسانك*

and, *يا عمي وسيدي ونج راسي انا لك تلميذ وحذاءك على راسي*; when he had drunk off the wine, the Imâm turned towards him, saying: "Wouldst thou take up the sandals of those here present upon thy head, to do honor to thy Lord?" — *هل ترضى ان ترفع احذية هؤلاء الحاضرين على راسك انرا ما لسيدك*; to which he

replied: "Nay, but only the sandal of my lord" — *كلا بل حذاء*; *سيدي*; whereupon the company laughed at his want of docility. Then the Minister (الخادم), being so directed by the assembly, brought to them the sandal of the Pursuivant; and, when they had uncovered the candidate's head, they laid it thereon, and put over it a white rag; after which the Pursuivant began to pray over him, that he might receive the mystery. When this prayer was ended, the sandal was taken from his head, he was enjoined secrecy, and all dispersed. This is what is called the Betokening Adoption (الجمعية المشورة). After forty days, another assembly was convened, another cup of wine was drunk by the candidate, and he was directed to say: "In the faith of the mystery of 'Ain-Mîm-Sîn" — *س م س* — which our author explains by informing us that 'Ain stands for 'Alî, or the Archetypal Deity (المعنى), Mîm for Muḥammad, or the Expressed Deity (الاسم), or the Intermediary (احباب), and Sîn for Salmân 'al-Fârsî, or the Communicator (الصاب) — and was charged by the Imâm to pronounce the cabalistic word composed of those three letters, namely, 'AMS, five hundred times a day. As before, secrecy was enjoined, and the so-called King's Adoption (جمعية الملك) was now accomplished. Another interval of probation, lasting seven months (which with common people is extended to nine), having passed away, our author was called before another assembly, in whose presence he stood at a respectful distance; when a Deputy (وكيل) rose amid the assembly, having the Pursuivant

on his right, and the Dignitary (النقيب) on his left, each with a cup of wine in his hand; and all, turning towards the Imâm, chanted the Third Melody by 'al-Husain Bin Hamdân 'al-Khusaibî (see below); after which, facing the Second Preceptor (المُرشد الثاني),* the whole assembly chanted to him the following:

"I inquire after the traits of nobleness—where dwell they? to thee have certain men pointed me. By the reality of Muhammad and his race, compassionate one who comes to kiss thy hands. Thou art my goal, let not my thought of thee prove vain; account us to-day as depending upon thee"—

سألت عن المكارم أين حلّوا بعض الناس دتّو عليك
 بحقّ محمد مع آل بيته أرحم من أتى يقبل يديك
 قصدتك لا تخيب فيك شيء نحن اليوم محسودين عليك—

and having put their hands upon his head sat down. Then he stood up, took the Deputy's cup from his hand, bowed his head in worship, and read the Chapter of Bowing of the Head (see below). Having recited this litany, he raised his head, and read the Chapter of the 'Am (see below). Then he drank off the wine received from the Deputy, and read the Chapter of Salutation (see below). After this, he stood with his face towards the Imâm, and said: "Hail, hail, hail, O my lord Imâm!"—*نعم نعم نعم يا سدى الامام*; to which the Imâm replied: "May it be well with thee and those around thee! Thou hast done that which these here assembled have not done; for thou hast taken in thy hand the cup, hast drunk, hast bowed the head, and hast saluted; and to God is humble worship due. But what is thy desire, and what wouldst thou?"—*بنعم عليك وعلى من حوالبك بعد عملت ما لم تعمله هذه الجماعة لانك اخذت الفدح بمدك وشربت وسجدت وسلمت والله الساجد ما في حاجتك وماذا تريد* To this the Dignitary answered: "I would have an evening of the countenance of my Master"—*أريد ان امسى بوجه مولاي*; and then, retiring, he looked towards the heavens, and came back to the assembly, and said: "Hail, hail, hail, O my lord!" to which the Imâm replied as before: "What is thy desire, and what wouldst thou?" Then said the Dignitary: "I have a desire, and

would it might be sanctioned"—*في حاجة اريد فصأحا*; the Imâm replied: "Go to, I sanction it"—*اذهب اقصينا*. The Dignitary then stepped aside from the assembly, and approached the candidate, to give him an opportunity to kiss his hands and feet; which being done, he returned, and said: "Hail, hail, hail, O my lord

* a. e., the Dignitary.

Imâm." Then the Imâm said to him, again: "What is thy wish, and what wouldst thou?" to which he gave for answer: "A per-

son has presented himself to me in the way"—انه تراءى لى شخص. *بالطريق*. Again the Imâm spoke: "Hast thou not heard what was said by our elect lord: 'As for the night-mare duty, no man of might can take it patiently'?"—الدين العادى الليل يجزع منه كل. *صندبد*, and he replied: "I have a stout heart, no fear for me"—

لى قلب فوق ولا خوف على, and then, after eyeing the candidate, turned towards the assembly, and said: "This person, named so and so, has come to be initiated in your presence"—هذا الشخص.

اسمه فلان وهو قد اتى ليتأدب امامكم. The Imâm then inquired:

"Who directed him to us?"—من دله علينا. to which the Dignitary replied: "The eternal Archetypal Deity, the august Expressed Deity, and the honored Communicator—signified by the word 'AMS'—المعنى القديم والاسم العظيم والاباب الكبرى وهى لعنة عمس"—

Said the Imâm: "Bring him, that we may see him"—ايت به. whereupon the Preceptor (المُرشد) took him by the right hand, and led him towards the Imâm. On his approach, the Imâm stretched out his feet, which the candidate kissed, and also his hands, and said to him: "What is thy desire, and what wouldst thou, O young man?"—ما حاجتك وماذا تريد ايها العلام. Thereupon the Pursuivant rose, and stationing himself at the candidate's side instructed him to say: "I ask for the mystery

of your faith, O multitudes of believers"—بسر الذى انتم فيه يا—. *معاشر المؤمنين*. Then, eyeing him with a stern look, the Imâm said: "What impels thee to seek from us this mystery, crowned with pearls large and small, which only a familiar angel, or a commissioned prophet, can support? Know, O my child, that there are many angels, but that only the Familiars can support this mystery; and that the prophets are numerous, but that only the Commissioned can support this mystery; and that there are many believers, but that only the Approved can support this mystery. Wilt thou suffer the cutting off of thy head, hands, and feet, and not disclose this august mystery?"—ما الذى حملك—

على ان تطلب متا هذا السر المكل باللولو والدر ولم يحمله الا كل ملاك مقرب او نبي مرسل اعلم يا وندى ان الملائكة كثيرون ولا يحمل هذا السر الا المقربون والانبياء كثيرون وليس منهم من يحمل هذا السر الا المرسلون والمؤمنون كثيرون وليس منهم من يحمل هذا السر الا المختنون انقبـ

قنّع الراس واليدين والرجلين ولا تبيح بهذا السرّ العظيم ; to which the reply was : "Yes"—نعم. Thereupon he added : "I wish thee

to furnish a hundred sponsors"—أريد منك مائة كفيل—; at which those present interposed : "The rule! O our lord Imâm"—القانون يا سيدنا الامام, and he said : "In deference to you, let there be twelve sponsors"—اكراما لكم ليكن اثنا عشر كفيلا—. Then the Second Preceptor stood up, and kissed the hands of the twelve sponsors, and the candidate kissed their hands. Then the sponsors rose and said : "Hail, hail, hail, O my lord Imâm," and the Imâm said : "What is your desire, ye nobles?"—ما حاجتكم ايها الشرفاء, to which they having replied : "We have come to be sponsors for so and so"—اتينا لنكفل فلانا—, the Imâm inquired : "In case he discloses this mystery, will ye bring him to me, that we may cut him to pieces, and drink his blood?"—

؛ اذا باح بهذا السرّ اذتوني به لكي نقتله نفديعا ونشرب دمه ; they answered : "Yes"—نعم ; he added : "I am not satisfied with your sponsorship alone—nay, but I would have two persons of consideration to be responsible for you"—لست اكمى بكمالكم فقط—. بل اريد اثنين معتمدين بكفلانكم. So one of the sponsors ran, with the candidate after him, and kissed the hands of the two required sponsors, whose hands the candidate also kissed. Then they two stood up, with their hands on their breasts; and the Imâm turned toward them, and said : "God give you a good evening, O sponsors respected and pure, men of mark and no sukkings! But what would ye?"—اللّٰه يمسيكما باخير ايها الكعبلان—. and they replied : "We have come to be sponsors for the twelve sponsors, and also

اتنا قد اتينا لنكفل الاثنى عشر كعبلا وهذا انسخص— for this person"—; whereupon he said : "In case, then, he runs off before having fully learnt our forms of prayer, or discloses this mystery, will ye two bring him to me, that we may take his life?"—

فاذا هرب قبل ان يكمل حفظ الصلوة او باح بهذا السرّ هل نأتيه به لنعدم حيانه ; and they replied : "Yes"—نعم ; and the Imâm spoke again : "Sponsors are perishable, and sponsors for sponsors abide not—I would have from him something that will last"—

ان الفلاء يفنون وكفلاء انكلاء يفنون وانا اريد منه شيئا لا يفنى. They then gave way, and the Imâm said to the candidate : "Come near to me, O young man"—اادن متي يا غلام—; so he approached him, and at the same moment the Imâm adjured him, by all the heavenly

bodies, that he would not disclose this mystery; and afterwards gave into his right hand the Book of the Summary (كتاب المجموع), while the Pursuivant, stationed at his side, instructed him to say: "Be thou extolled!—swear me, O my lord Imâm, to this august mystery, and thou shalt be clear of any failure in me"—

تفضل حلفنى يا سيدى الامام على هذا السر العظيم واننت برئى من خطيئى
Then the Imâm took the book from him, and said: "O my child, I swear thee not in respect to money, or suretyship—nay, but in respect only to the mystery of God, as our chiefs and lords have sworn us"—

يا ولدى احلفك ليس لاجل مال ولا جوار بل لاجل سر—
الله ففط كما حلفنا مشايخنا وساداتنا
This action and these words he repeated three times; after which the candidate placed his hand upon the Summary three times, making oath thereby to the Imâm, that he would not disclose this mystery so long as he should live. The common people, as our author tells us, are made to swear more times, especially among the Nusairis of Lâdikîyah.

Our author's account of the ceremonies of his initiation concludes as follows: "Then the Imâm said: 'Know, O my child, that the earth will not suffer thee to be buried in it, shouldst thou disclose this mystery; and thy return will not be to enter into human vestments—nay, but, when thou diest, thou wilt enter into vestments of degrading transformation, from which there will be no deliverance for thee, forever'—

اعلم يا ولدى ان—
الارض لا تعملك فيها مدفونا ان احكت بهذا السر ولا تعود تدخل القمصان

البشريه بل حين وفاتك تدخل قمصان المسوخية وليس لك منها نجاه ابدا
Then they seated me among them, and, uncovering my head, put a veil over it; and the sponsors placed their hands upon my head, and began to pray: first, they read the Chapters of Victory, Bowing the Head, and the 'Ain (see below); and, after drinking some wine, read also the Chapter of Salutation (see below), and raised their hands from off my head;

whereupon the introducing uncle* (عم الدخول) took hold of me, and made me salute my First Preceptor (مرشدى الاول), and then, taking a cup of wine in his hand, gave me drink, and instructed me to say: 'In God's name, by the help of God, and in the faith of the mystery of lord 'Abû 'Abdallâh, possessor of divine knowledge, in the faith of the mystery of his blessed memorial, in the faith of his mystery—God give him happiness!'—

* i. e., the Dignitary.

وبالله وسر السید ابی عبد الله العارف بمعرفة الله سر تذكاره الصالح سره
 "اسعده الله." The assembly then dispersed, the Dignitary taking
 our young votary to his house, where he taught him the Form-
 ula of Disburdening (see below), and also made him acquainted
 with the various forms of prayer, to the number of sixteen, in
 which the Nuṣairis pay divine honors to 'Alī.

We are thus brought to the second part of our author's first
 section, which sets before us the inmost principles of Nusairian
 religion with a fullness and distinctness entirely new. Each
 form of prayer is called a chapter, with a particular name in-
 dicative of its contents; and in several cases the so-called prayer
 has little or none of the tone of supplication, being, for the most
 part, or wholly, a recital, and that without any special propriety
 in reference to devotion, which we can discover. The whole
 collection, to which the general title of *Dustūr* (الدستور, i. e.
 the Canon) is given in one of our author's later sections, here
 follows, translated and in the original text, together with all im-
 portant notes by our author. As for explanations of our own,
 they may be generally dispensed with, both here and elsewhere,
 our aim having been to make such translations as should be
 self-explanatory, so far as possible, to the careful reader of the
 whole series. We print the text of the Nusairian *Dustūr*, as
 well as of other formulas which we meet with in this tract,
 without correction of errors in syntax and prosody, as our
 author, for the sake of not impairing their authenticity, how-
 ever slightly, appears to have left them—after collating the
Dustūr and the Formula of Disburdening, as he expressly in-
 forms us, with authoritative copies. But where there seems to
 be no such reason for punctiliousness, or where the printer
 alone appears to have been at fault, we have taken the lib-
 erty to correct all errors in the original text of our author's
 tract, without calling attention to them. The name of 'Alī,
 which we find printed both connectedly, with *بن*, and discon-
 nectedly, with *ابن*, we leave everywhere as we find it, though
 the connected reading would seem most consistent with the Nu-
 sairian denial of the human origin of 'Alī.

"First Chapter, called the Commencement.

"Sure is he to prosper who obtains the friendship of him with the
 bald forehead! My beginning is to acknowledge myself a humble crea-
 ture. I commence with the commencement of yielding my love to the
 holiness of the archetypal divinity of the Prince of Bees, 'Alī 'Ibn 'Abū
 Ṭālib, denominated Haidarah 'Abū Turāb—in reliance upon whom I
 undertake and by whom I accomplish, through the remembrance of
 whom I am secured, in whom I am saved, to whom I betake myself, in
 whom I am blessed, of whom I ask help, in whom I begin and in whom

I end, with orthodoxy in religion and faithfulness to the indubitable truth. Said lord 'Abū Shu'aib Muḥammad Bin Nuṣair to Yahyā Bin Ma'yan 'as-Sāmīri: 'O Yahyā, whenever that which brings life befalls thee, or when death-bringing fate takes hold on thee, utter an invocation elevated, sincere, purified, reverent, choice, splendid, sublime, holy, sanctified, radiant, luminous, for thy deliverance from these human vestments of flesh and blood, and that thou mayest attain to the palaces of light, and say: "In thee am I blessed, O thou who makest demonstration by thy loving advances, who art manifest by thy power, who art hidden by thy wisdom, correlate to thyself by thyself, who to thine Expression givest names of thine attributes, who art he, who art all, O eternal, O thou, existing from eternity, who wilt not cease to be, O cause of causes, thou stiller of the movements of revolving cycles, O goal of goals, thou who bringest ends to an end, thou who knowest the mysteries of secret things, O present one, O self-existent, O manifest, O limit of all aims, thou who art hidden yet unclothed, thou whose lights arise out of thee and set in thee, from thee come forth and to thee return, thou who givest to every light a manifestation, to every manifestation a qualitative expression, to every qualitative expression a substratum, to every substratum a fixed embodiment, and to every embodiment an access, whereby the Communicator directs to thee, and introduces to thee." It is thou, O Prince of Bees, O 'Alī Bin 'Abū Ṭālib, who art the point of all demonstration, and the all; it is thou who art he. O thou who art he, thou who art he, and of whom no one knows what thou art, save thyself, I entreat thee, by the Questions of Sin,* closely interlocked like woven threads, by that which petitioners ask for of thee, by the Preceptor of Preceptors, and by 'Alī Zaim 'ad-Dīn wa 'al-'Ābidīn, that thou wouldst unite our hearts, and the hearts of our believing brothers, in dutifulness, the fear of God, rectitude, knowledge, and religious worship. We call to mind thy pure presence, thine excelling power, thine all-embracing compassion, and the indispensable requirement and incumbent duty, which are mysteries and a memorial, and a majesty, glory, might and dominion; and thy brilliant appearance, thy glorious tabernacles, and the Tabernacle of Sublimity and Crown of Direction;† and the right religion, the straight path, of which whosoever knows both the hidden and the outward sense is secured and saved, which our lord Salsal Salmān has acquainted us with, which we recite, to which we have been pointed and directed by our chief and lord, the crown of our heads, the exemplar of our religion, the refreshment of our eyes, lord 'Abū 'Abdallāh 'al-Husain Bin Hamdān 'al-Khusaibi, whose spirit was sanctified by the Highest, that his embodiment might be an embodiment of purity, and his substratum a substratum of truth and integrity. In the name of God, by the help of God, and in the faith of the mystery of lord 'Abū 'Abdallāh, possessor of divine knowledge, in the faith of the mystery of his blessed memorial, in the faith of his mystery—may God give him happiness!"—

* i. e., by the doctrines embodied in the Nusairian catechism.

† 'al-Khusaibi, respecting whom see below.

السورة الاولى واسمها الاول

قد افلح من اصبغ بولاية الاجلح استفتح بالى عبد استفتحت باول اجابتي
بحب قدس معنوية امير النحل على ابن ابى طالب المكتنى بحيدرة ابى
تراب فيه استفتحت وفيه استنجدت وبذكره افوز وفيه انجو واليه الحجا
وفيه تباركت وفيه استعنت وفيه بدأت وفيه ختمت بصحة الدين واقتبات
اليقين قال السيد ابو شعيب محمد بن نصير ليجى بن معين السامري
يا جحى اذا نزلت بك نزلة بالحياة ودهت بك دھينه بالمات فادع دعوة عالمة
خالصة محلصة نفية نقبة بيضاء علوية شاهرة زكية مشعشة نورانية
تخلصك من هذه العمصان البشرية اللحمية الدموية وتلحقك بالهيكل
النورانية ففل فيك تباركت يا دليلا بدلتك با شاهرا بقدرته با باطنا بحكمته
يا مجيبا ذاته بذاته با محاطا اسمه بصفاته با هو با كل ما فديم با ازل لم
تزل با معلل العلل ما مغنى حركات الدول يا غاية الغايات يا منهى النهايات
يا عالم باسرار الخفيات يا حاضر يا موجود يا شاهر يا مقصود يا باطنا بغير
غمود يا من انوارك منك تشرق وفيك تغرب ومنك بدت واليك تعود يا
من جعل لكل نور ظهورا وكل ظهور اسما وكل اسم مكانا وكل مكان مقاما
وكل مقام بابا يرشد الباب منه اليه ويدخل الباب منه اليه وانت يا امير
النحل يا على بن ابى طالب الدليل عليه والتك انت هو يا هو يا هو يا
من لا يعلم ما هو الا هو واسألك مسأئل السيين تسألون سلما سلك سالك
سلك مما سألك السائلون ومرشد المرشدين وبعلى زين الدن والعابدين
ان تولف ما بين فلوبنا وقلوب اخواننا المؤمنين على البر والنقوى والتعوىم
والعلم والدين نذكر حضرتك الطاهرة وفدرك انباهرة ورحمتك الشاملة
والفرض اللازم والحق الواجب الى اسرار وتذكارات وجلال وافنخار وعز وانتصار
وضلعتك الزاهرة وبابك العاخرة ومة العلى وناج الهدى والدين القيم
والصراط المستقيم ومن عرف باطنه وشاهره فاز ونجى والذى قد عرفنا به
سيدنا سلسل سلمان ينلى وقد دلنا اليه وارشدنا اليه شيخنا وسيدنا وناج
رؤسنا وقدوة ديننا ومرت اعيننا السيد ابي عبد الله الحسين بن محمدان
الخصيبي قدس العلى روحه لان مقامه مقام الصفاء ومحلته محل الصدق

والوفاء بسم الله وبالله وسر السيد ابي عبد الله العارف معرفة الله سر تذكاره
الصالح سر اسعده الله انتهت —

In explanation of this chapter, our author observes that, according to Nusairian doctrine, God is visible and yet not wholly definable (ان المعبود عندهم يرى ولكنه ليس محدودا بكلية), whence the expression: "O manifest, O limit of all aims, thou who art hidden yet unclothed, whose lights arise out of thee and set in thee, from thee come forth and to thee return" (see p. 235). He also here, first, alludes to a separation of the Nusairis into four parties: 1. those who pay homage to the heavens, whom he calls Northerners (الشماليون); 2. adorers of the moon, whom he elsewhere names Kalâzians (الكلازيون)*; 3. worshippers of the twilight; and 4. worshippers of the air. By the first of these parties, the passage just quoted is understood to point to the heavens, "out of which," say they, "the stars arise and in which they set; and which are visible, yet undefinable, as to their prime configuration, except by the Expressed

Deity (وانها ظاهرة لكن لا يفدر احد ان يجدها بصورتها الاصلية الا) الاسم." But the second party, in support of their adoration of the moon, allege that other expression of this chapter: "thy brilliant appearance," saying "that the moon is manifest to sight, while, as for the dark part of it, that represents the being of 'Alî Bin 'Abû Tâlib, which is veiled from our eyes, which we now see as a dark object, though, when we are purified from these bodily vestments, and exalted among the stars, through our faith, we shall behold it in sapphire-splendor (فيقولون انه ظاهر) والسواد الذي في الغمر هو ذات علي بن ابي طالب وهو محجوب عن اعيننا ونراه الان اسود ومتى خلصنا من هذه الغمسان فاننا نرتفع بامانتنا الى ما

"(بين اللواكب وحينئذ نراه بنظرة الصفرة). The worshippers of the twilight argue, in their own favor, from the expression: "whose lights arise out of thee etc.," saying that all the lights of heaven make their appearance from out of the East, and revolve, and set in the West; and they may be seen to pray with their faces turned towards the sun as it is rising or setting, in the belief that the twilight-reddening of the sky creates the sun (ظانين ان ذلك) (الاستمرار هو خالف الشمس according to the words of Shaikh 'Alî the Magian, in the so-called Legacy (الورثة) left to them by him:

Probably so named from Shaikh Muhammad Bin Kalâzû, who is quoted below.

"By [?] the full moon, whose lights from her sun come forth; and by [?] her sun, production of the morning-beam"*—

والبدر أنواره من شمسه ظهرت وشمسه من عمود
الصبيح موجداه—

The worshippers of the air have also their own argument from this chapter, appealing to the expression: "O thou who art he, thou who art he," which, by a slight change of reading, they make to mean "O thou who art the air."

"Second Chapter, called the Canonization of 'Ibn 'al-Walī."

"How beauteous a vision has the sleeper in his place of slumber, who hears with the ear, but sees not the person, and calls out and says: 'Here am I, here am I, O Prince of Bees, O 'Alī 'Ibn 'Abū Tālib.' O desire of every desirer, eternal by divinity, mine of empire, thou who art our God, as hidden, and our Imām, as manifest, thou who art manifest where hidden, and hidden where manifest, who appearest in hiding, and hidest thyself in appearing, who dost display the quality of divine being, who art exalted with supremacy, who art veiled in Muhammad-quality, and who dost call that which is of thyself to thyself, by thyself, thou, O Prince of Bees, O 'Alī—may thy light arise, thy shining break forth, thy radiance be diffused, thy benefits be magnified, thy praise be glorious!—do thou save me, I pray, from the evil of thy degrading transformations: for ourselves and all our believing brothers I entreat deliverance from the evil of deterioration, annulment of faculty, degradation, defilement, stagnation, wilting, and the waste-heap. This is for thee to bestow. In the faith of the mystery of the saint 'Ibn 'al-Walī, to wit, 'Abu-l-Husain Muhammad Bin 'Alī 'aj-Jalī—peace be to us from the remembrance of him! in the faith of his mystery—may God give him happiness!"—

السورة الثانية واسمها تعديسة ابن الولى

باحسن ما برى اناسم فى منامه وهو سمع الحس ونم برى انسخص وهو
بنادى ويقول لبيك لبيك يا امير المؤمنين يا على ابن ابي طالب يا رغبة
كل راغب يا قديم باللاهوت يا معدن الملوك انت انهننا باطنا وامامنا
ظاهرا يا من ظهرت فيما ابطننت وابطننت فيما ظهرت وظهرت بالاستنار
واستنرت بالظهور وظهرت بالذاتمة وتعاليت بالعلوة واحجبت بالحمدية
ودعوت من نفسك الى نفسك بنعسك انت يا امير المؤمنين يا على اشرق
نورك وابرز سفورك وسطع ضياوك وتعظمت الاوك وجل دماؤك بان نامتى

* In this case, and three others which it is scarcely necessary to specify, we have put the original words of a poetical quotation into verse form, although, in our tract, printed as prose. The measure is, in every instance, *rajaz*.

من شرّ مسوخياتك لنا ولجميع اخواننا المؤمنين من شرّ القسح والنسخ
والمنسخ والوسخ والرسخ والقش والفساش انك على ذلك قدبر سرّ الولى
ابن الولى ابو الحسين محمد بن على الجلى علينا من ذكره السلام سرّه
أسعده الله أنتهت —

The sleeper referred to in this chapter, says our author, was one of the ministers of Muhammad 'al-Bakir Bin 'Alî Zain 'al-'Âbidîn, who, as is believed by the Nusairis, was sleeping in his house, on a certain day, when a voice called upon him, saying: "Arise and go to such a place;" upon which he awoke in a maze from his dream, and saw no one, only the lights of heaven, and said: "Here am I, here am I, O Prince of Bees, 'Alî Bin 'Abû Tâlib"—all which is plainly stated in the Book of the Summary.

The blessing sought for in this prayer is deliverance from seven sorts of degrading transformation, together with their subdivisions, embracing all kinds of cattle and wild beasts, and other varieties of life (فطلب المصلى فيها الخلاص من المسوخية التي هي سبعة أشكال وتل شكل منها أجزاء السبعة الأشكال المذكورة بحوي بطلب المصلى فيها الخلاص من المسوخية التي هي سبعة أشكال وتل شكل منها أجزاء السبعة الأشكال المذكورة بحوي (جميع أنواع الأبعام والوحوش وغيرها من الحيوانات); and it is believed that these seven sorts of transformation are the seven floors of Hell mentioned in the Kurân: "and it has seven entrances, with a part divided off to each;"* and so the sinner, in this petition, with humble heart, and spirit submissive to his lord 'Alî 'Ibn 'Abû Tâlib, intercedes for salvation therefrom.

"Third Chapter, called the Canonization of 'Abû Sa'id.

"I entreat thee, O possessor of dominion, Prince of Bees, O 'Alî, O bounteous, thou who art from eternity, O gracious, O thou inciter of the Communicator—I implore thee, by the Elect Five, the Revealing Six, the Seven Twinkling Stars, the Eight Strong Bearers of the Throne, the Nine Gifted with Muhammad-quality, the Ten Chanticleers of Holiness, the Eleven Ascension-points of Communicator-quality, and by the Twelve Strings of Imâmship, by the reality of all in thee, O goal of universal being, Prince of Bees, thou lord of vicissitude, thou who art the Sole, whose Expression is the One, whose Communicator is singleness itself, thou who didst appear in the seven tabernacles of divine quality—I implore thee that thou wouldst make our hearts and our limbs firm in the profession of the holy knowledge of thyself; and do thou disencumber us from these habitations of human nature, and clothe us with vestments of light, amid the stars of heaven. We call to mind the presence of our chief and lord, the most illustrious, the most valiant, the lusty, the God-fearing, 'Abû Sa'id, 'Abû Sa'id 'al-Maimûn 'Ibn Kâsim 'at Ta-

barānī, possessor of divine knowledge, abstinent from the forbidden, who avenged himself with his own hand on the head of 'Abū Duhaibah—may the curse of God rest upon 'Abū Duhaibah, and peace and God's mercy upon 'Abū Sa'id! In the faith of the mystery of 'Abū Sa'id the lusty, the God-fearing, the pious, 'al-Maimūn 'Ibn Kāsim 'at-Ṭabarānī, in the faith of his mystery—may God give him happiness!"—

السورة الثالثة واسمها تعديسة ابي سعيد

اسألك يا مالك المملك يا امير النحل يا على يا وهاب يا ازل يا ثواب يا
داحي الباب اسألك بالخمسة المصطفية والستة العجلية بالسبعة الكواكب
الدربة بالثمانية سمالة العرش القوية وبانتمسة الحمدية وبالعشرة دجاجات
الزكية وبالاحد عشر مضالع البابية وبالاثنى عشر سطر الامامية بحفهم عندك
با غاية التلية يا امير النحل يا صاحب الدولة يا من انت الاحد واسمك
الواحد وبابك الوجدانية يا من ظهرت في السبع فباب الذاتية بان تجعل
قلوبنا وجوارحنا نابتة على معرفتك الزكية وخلصنا من هذه الهياكل
الناسوتية ولبسنا الغصان النورانية بمن الكواكب السماوية نذكر حضرة
شبهتنا وسيدنا الاجل الاكبر الشاب التقى ابي سعيد ابي سعيد الميمون
ابن قاسم الطبراني العارف معرفة الله المكف عما حرم الذي اخذ حقه بيده
من قفا ابي ذهبيته وعلى ابي ذهبيته لعنة الله وعلى ابي سعيد السلام ورحمة
الله سر ابي سعيد الشاب التقى الحر الميمون ابن قاسم الطبراني سره
اسعده الله —

The "Elect Five" are the times of prayer prescribed to the Nusairis: namely, that of Muḥammad, at mid-day; that of Fāṭimah, in the afternoon; of Ḥasan, son of 'Alī 'Ibn 'Abū Ṭālib, at sunset; of Ḥusain, brother of Ḥasan, at evening; and of Muḥsin, Mystery of Obscurity, at day-break. Whoever is not conversant with the names of these five persons, and with the times of prayer called after them, prays in vain.

The "Revealing Six" are the six beings, namely, Salmān and the Five Incomparables, mentioned in the Chapter of Victory (see below), or the six days of creation, or the manifestations of God to Abraham, Moses, and other of the prophets.

The "Seven Twinkling Stars" are the seven planets, namely, Saturn, Mars, and the rest.

The "Eight Strong Bearers of the Throne" are the eight cabalistic words, that is, the names of the Five Incomparables, and Ṭālib, 'Aḳīl, and Ja'far 'at-Ṭayyār.

The "Nine Gifted with Muḥammad-quality" are names of certain of the Strings of Imâmship, from Muḥammad 'Ibn 'Abdallâh to Muḥammad 'aj-Jawâd.

The "Ten Chanticleers of Holiness" are the Five Incomparables, together with Naufal, 'Abu-l-Hârith, Muḥammad 'Ibn 'al-Hanafîyah, 'Abû Barzah, and 'Abdallâh Bin Naḡhlah, whom the Nusairis believe to be the largest of the stars, each having rule over a number of other stars (ويعتقدون بأنهم أعظم النواكب) (وكل كوكب منهم يحكم على فية من بقية النواكب). As 'al-Khuṣaibî says in his *Dîwân*, all the stars are castles of the heavens, mystically, except the ten just mentioned, the Chanticleers, whose cock is Salmân 'al-Fârsî (البلطن صيخان السماء دما) يخبر عنها أخصيبي في ديوانه ما خلا العشرة المذكورة فهي الدجاجات (ودبكا سلمان الفارسي). In the secret books of the Northerners, such as the Book of the Greeks (كتاب اليونان) and others, the cock is said to be Muḥammad Bin 'Abdallâh.

The "Eleven Ascension-points of Communicator-quality" are Rûzbah 'Ibn 'al-Marzabân, 'Abu-l-'Alâ Rashîd 'al-Hajarî, Kan-
kar 'Ibn 'Abû Khâlid 'al-Kâbulî, Yahyâ Bin Mu'ammar, Jâbir Bin Yazîd 'aj-Ju'fî, Muḥammad 'Ibn 'Abû Zainab 'al-Kâhilî, 'al-Mufaḍḍhal Bin 'Umar, 'Umar Bin 'al-Mufaḍḍhal, Muḥammad Bin Nusair 'al-Bakrî 'an-Numairî, Dihyah Bin Khalîfah 'al-Kalbî, and 'Umm Salamah.

The "Twelve Strings of Imâmship" are Muḥammad 'al-Muṣṭafî, 'al-Ḥasan 'al-Mujtabî, 'al-Ḥusain the martyr of Karbalâ, 'Alî Zain 'al-'Âbidîn, Muḥammad 'al-Bâkîr, Ja'far 'as-Sâdiq, Mâsâ 'al-Kâzim, 'Alî 'ar-Riḍhâ, Muḥammad 'aj-Jawâd, 'Alî 'al-Hâdî, 'al-Ḥasan 'al-'Askarî, and Muḥammad Bin 'al-Ḥasan 'al-Hujjah.

"Fourth Chapter, called the Pedigree.

"How well is it that God should provide for me! how well that my way should lead to God! how well that I should hear and hearken to my chief, my lord, my preceptor, who graciously bestows upon me, as God hath graciously bestowed upon him, the knowledge of 'Ain-Mim-Sin, which is by virtue of the testimony that there is no God but 'Alî 'Ibn 'Abû Tâlib, with the bald forehead and temples, the adorable; and no Intermediary but lord Muḥammad, worthy to be praised; and no Communicator but lord Salmân 'al-Fârsî, the pattern. This is what I have heard from my chief and lord, my goal, my stay, my guide to the way of salvation, my means of access to the fountain of life, the liberator of my neck from the bondage of servile existence (through knowledge of the Supreme Sanctuary of Divine Being), the eminent lord, the great mountain-barrier, my uncle, my chief, my lord, the crown of my head, my veritable father, 'Aḥmad. He communicated this august mystery to me in the year so and so, in the month so and so, and on the day thereof so and so; and 'Aḥmad heard it from 'Ibrâhîm; 'Ibrâhîm

from Kāsim; Kāsim from 'Alī; 'Alī from 'Ahmad; 'Ahmad from Khadhīr; Khadhīr from Salmān; Salmān from Šabbāh; Šabbāh from Yūsuf; Yūsuf from Jibrā'il; Jibrā'il from Mu'allā; Mu'allā from Yāsīn; Yāsīn from 'Isā; 'Isā from Muḥammad; Muḥammad from Ḥadā Muḥammad; Ḥadā Muḥammad from Ridhā 'Ahmad; Ridhā 'Ahmad from Šifandī; Šifandī from Balādhur-i-'Asad; * Balādhur-i-'Asad from Hassān 'ar-Rashīkī; Hassān 'ar-Rashīkī from Muḥammad; Muḥammad from Murhif-i-Miṣr; Murhif-i-Miṣr from 'Akd Jibrā'il; 'Akd Jibrā'il from 'Abdallāh 'aj-Jughulī; † 'Abdallāh 'aj-Jughulī from 'Ismā'il 'al-Luffāf; 'Ismā'il 'al-Luffāf from Ja'far 'al-Warrāk; Ja'far 'al-Warrāk from 'Ahmad 'at-Tarrāz; 'Ahmad 'at-Tarrāz from 'Abu-l-Ḥusain Muḥammad Bin 'Alī 'aj-Jalī; 'Abu-l-Ḥusain Muḥammad Bin 'Alī 'aj-Jalī from lord 'Abū 'Abdallāh 'al-Ḥusain Bin Ḥamdān 'al-Khuṣaibī; lord 'Abū 'Abdallāh from his chief and lord 'Abū Muḥammad 'Abdallāh Bin Muḥammad 'aj-Jannān 'aj-Junbulān, the recluse devotee, who came from Persia; 'Abdallāh 'aj-Jannān 'aj-Junbulān from Muḥammad Ibn Jindab; Muḥammad Ibn Jindab from lord 'Abū Shu'aib Muḥammad Bin Nusair 'al-'Abdī 'al-Bakrī 'an-Numairī, who was Communicator to Ḥasan 'al-'Ākhīr 'al-'Askarī†—peace be to us from him, and greetings be his! Through Muḥammad Bin Nusair did the family and the religion take a stand—exalted be our master 'al-Ḥasan 'al-'Askarī far above the babblings of errorists and the talk of calumniators! In the faith of the mystery of religion, in the faith of the mystery of our brothers, who give out light wheresoever one of them has power, by their mystery—may God give happiness to them all! I also testify that 'al-Ḥasan 'al-'Ākhīr 'al-'Askarī was the First and the Last, the Hidden and the Manifest, and omnipotent”—

السورة الرابعة واسمها النسبة

أحسن توفيقى بالله وتربقى لله وأحسن سمعى واستمعاعى من شيخى وسيدى ومرشدى المنعم علىّ كما أنعم الله عليه معرفة ع م س. وفي بشهادة أن لا إله إلا على ابن أبى طالب الأصغر الأنور المعبود ولا حجاب إلا السيد محمد المحمود ولا باب إلا السيد سلمان العارضى المنفصود وهذا ما سمعته من شيخى وسيدى وغابنى ومعتدى ومهدبى إلى تربق النجاة وموردى إلى ينبوع الحيوه ومعتق رقبى من رق العبودية بمعرفة كنه الذات العالیه السيد الفاضل والنور العظيم عمى وشيخى وسيدى وناج راسى ووالدى الحقيقى أحمد وفد الفى التى هذا السرّ العظيم فى سنة كذا وكذا فى شهر كذا ويوم كذا منه وسمع أحمد من إبراهيم وسمع إبراهيم من قاسم وسمع قاسم من على وسمع على من أحمد وسمع أحمد من خضر وسمع خضر من سلمان

* The original text has بلد.

† The original text has الجوغلى.

‡ Died in A.D. 873-4.

وسمع سليمان من صبايح وسمع صبايح من يوسف وسمع يوسف من جبريل
 وسمع جبريل من معلى وسمع معلى من ياسين وسمع ياسين من عيسى
 وسمع عيسى من محمد وسمع محمد من هذا محمد وسمع هذا محمد من
 رضى احمد وسمع رضى احمد من صفندى وسمع صفندى من بلاذر اسد
 وسمع بلاذر اسد من حسان الرشيدى وسمع حسان الرشيدى من محمد
 وسمع محمد من مرفع مصر وسمع مرفع مصر من عقد جبرائيل وسمع عقد
 جبرائيل من عبد الله الجعلى وسمع عبد الله الجعلى من اسماعيل اللقاف وسمع
 اسماعيل اللقاف من جعفر انوراف وسمع جعفر انوراف من احمد الطراز وسمع
 احمد الطراز من ابو الحسين محمد بن على الجلى وسمع ابو الحسين محمد
 بن على الجلى من السيد ابي عبد الله الحسين بن محمدان الحصبى وسمع
 السيد ابي عبد الله من شيخه وسيده ابو محمد عبد الله بن محمد الجنان
 الجنبلان العابد الراهد الذى هو من بلد فارس وسمع عبد الله الجنان
 الجنبلان من محمد ابن حنطب وسمع محمد ابن حنطب من السيد ابو
 شعيب محمد بن نصير العبدى المكرى انميرى الذى هو باب لحسن
 الاخر العسكرى منه السلام والبه النسلیم ومن محمد بن نصير اقام النسب
 والدين وتعالى مولانا الحسن العسكرى عما يقول الضالون ونسب الطائفة
 علوا دميما سر اندين سر احوتما الجلبين ابن ما كان منهم مكين بسرهم
 اسعد عمر الله اجمعين واشهد بان الحسن الاخر العسكرى هو الاول وهو
 الاخر وهو الباشن وانظاهر وهو على كل شى ودير —

Be it known, says our author, that the Nusairian religion originated with Muḥammad Bin Nuṣair (أعلم أن ابتداء ديانة النصيرية) and that he was followed by Muḥammad 'Ibn Jindab; to whom succeeded 'Abdallāh 'aj Jannān 'aj Junbulān of Persia; and that after him came 'al-Ḥusain Bin Hamdān 'al-Khuṣaibī, whom the Nuṣairis esteem superior to all his successors, who perfected their prayers, and taught far and wide وهذا عندهم اعظم من كل من كان بعده وهو الذى اكمل صلاتهم واذاع (تعليمه في البلدان). In a certain poem of his, 'al-Khuṣaibī chides the Syrians for rejecting him, as follows:

"I am loth to abide in the land of Syria—may the curses of the Lord of all creatures rest upon them!"—

سأمت المقام بارض شام عليهم لعابن رب الانام —

After a while, he directed the course of his journeyings to Baghdād, and began to teach publicly, so that the governor heard of him, arrested him, and threw him into prison. But, when there was an opportunity, he escaped, and declared among his followers that the Messiah had delivered him by night, that the Messiah was Muḥammad, and that the sons of Muḥammad's daughter were the eleven disciples, in conformity with what he says in the Dîwân bearing his name:

"Said to me, in a dream, a pitying father: Thou art noble, of ancient lineage, O son of Khuṣaib; by help of the Intermediaries, the family of 'Aḥma', thou art free for thy life, by their love provided for"—

ثم فصد في سياحته بغداد وبدأ بنشر تعاليمه بين الناس فسمع به الوالى
فقبض عليه والفاء في الساجن ولما لاحت له فرصة هرب واشهر بمن اتباعه
بان السيد المسيح خلصه ليلا وانه محمد وابناء ابنت محمد الاحد عشر
دما ذلى في دوانه المسمى باسمه

دل لى في الامام اب سفيق انت بابن الحبيب حر عتيق

انت بالاحجب آل احمد ما عشت طليق بحبهم مرزوق —

He also taught that the Messiah was Adam, and Enos, and Kainân, and Mahalalîl, and Yared, and Enoch, and Methuselah, and Lamech, and Noah, and Shem, and Arphaxad, and Ya'rab, and Hûl, and Sâlih, and Lukmân, and Lot, and Abraham, and Ishmael, and Isaac, and Jacob, and the Prince, that is, Pharaoh, who lived in the days of Joseph, also Moses, and Aaron, and Caleb, and Ezekiel, and Samuel, and David, and Solomon, and Job, and 'al-Khadîr, and Alexander, and Saul, and Daniel, and Muḥammad; and, in general, that each prophet who has appeared in the world was an incarnation of the Messiah (وبالاجمال)

; (ان كثر نبى ظهر في هذا العالم هو المسيح (بعض حكام انونيين), such as Plato, Galen, Socrates, Nero; also, of certain wise men among the Persians, and the Arabs before Muḥammad (ومن حكام الفرس وعرب), such as Ardeschîr, Sapor, Luwai, Murrah, Kilâb, Hâshim, 'Abd Manâf, and others. Moreover, he taught that the mothers of the prophets of past times, and their wives, were incarnations of Salmân 'al-Fârsî, excepting the wife of Noah and the wife of Lot; and that Salmân was incarnate, also, in

the Eleven named in the notes on the Third Chapter, and in the queen of Sheba, and the wife of Potiphar; and has appeared in some inanimate objects, as well as in certain wild animals, such as the wolf supposed to have eaten Joseph, and in winged creatures, such as the hoopoe, the crow, the bee, and others. Besides all this, he taught that 'Alî 'Ibn 'Abû Tâlib was Abel, Seth, Joseph, Joshua, Asaph, Simon Peter, Aristotle, and Hermes; and has been incarnate in certain wild animals, such as the dog of the Companions of 'al-Kahf, the camel of Sâlih, and the cow which Moses commanded to be sacrificed.* His disciples numbered fifty-one, of whom five were men of note, namely, Muḥammad Bin 'Alî 'aj-Jalî, 'Alî Bin 'Isâ, 'aj-Jasrî, 'al-'Irâkî, and 'al-Kaṭanî; and whoever derives his instruction by a line of descent from either of these is regarded by the Nuṣairîs as 'al-Khusairî's brother.

To 'al-Husain Bin Hamdân succeeded Maimûn Bin Kâsim 'aṭ-Ṭabarânî, a disciple of Muḥammad Bin 'Alî 'aj-Jalî, and author of many Nusairian books, among which is the Summary of Festivals (مجموع الاعباد), noted for its revilings of 'Abû Bakr, 'Umar, and 'Uthmân, whom it calls the three Adversaries, they being considered by the Nuṣairîs as incarnations of Satan. The same person also composed the Book of Proofs of Divine Knowledge

pertaining to the Questions (كتاب الدلائل معرفة المسائل), in which it is said that the wolf supposed to have eaten Joseph was 'Abd 'ar-Rahmân Bin Muljam 'al-Murâdî, not Salmân 'al-Fârsî, as other Nuṣairîs believe; and the Book of the Compend on the Lectures of Pupils (كتاب الحاوي في وحيات التلاميذ); and another book, against the religion of 'Alî Bin Karmat and 'Alî Bin Kushkai; and many others.

"Fifth Chapter, called the Victory.

"Whenever God's help comes, and victory, and thou seest men domesticating themselves in the religion of God, by crowds, then glorify with praise to thy Lord, and ask his forgiveness; he is verily gracious. I testify that my sovereign is the Prince of Bees, 'Alî, who produced lord Muhammad out of the light of his essence, and called him his Expression, his self, his throne, and his seat, and named him with his own attributes; who is connected with him, not separate from him, nor yet veritably connected, while not widely separate—being connected with him by virtue of light, separate from him by manifested presence, so that Muhammad is of him like as the soul's feeling is of the soul, or as rays of the sun are of the sun's disk, or as the gurgling of water is of water, or as rending comes of binding,† or as the lightning flash is of

* See Kur. xviii 8, ff; vii. 71, ff; ii. 63, ff.

† Apparently, an allusion to the fructification of the earth by showers of rain: comp. Kur. xxi. 31. as quoted in the Perfume-string, below.

lightning, or as sight is of the seer, or as motion comes of rest; and, if 'Alī 'Ibn 'Abū Ṭālib wills to be manifested, he manifests him; or, if he wills to be hidden, he hides him under the effusions of his light. I also testify that lord Muḥammad created lord Salmān out of light of his light, and appointed him to be his Communicator, and the bearer of his revelation; so that he is Salsal and Salsabil,* Jābir and Jibrā'il, the representative of order and indubitable truth, truly the Lord of all worlds. I testify, likewise, that lord Salmān created the noble Five Incomparables, of whom the first is the greater incomparable, the odoriferous musk, the red jacinth, the green emerald, 'al-Mikdād Bin 'Aswad 'al-Kindī, and the others are 'Abu-dh-Dharr 'al-Ghifārī, 'Abdallāh Bin Rawāhah 'al-'Ansārī, 'Uthmān Bin Maḍh'ūn 'an-Najāshī, and Ḳanbar Bin Kādān 'ad-Dausī; who were servants of our master the Prince of Believers—glory and honor to his memory! and the creators of this world, from the lands of the orient to those of the occident, and of all the southern regions and the northern, the dry land and the ocean, and of every plain and every mountain, spanned by the blue vault of heaven, and embraced within the dusty earth, from Jābilkā to Jābirsā, including the lurking-places of sand-drifts, even to mount Kāf, and whatever is arched by the dome of the circling celestial sphere, even to 'as-Sāmirah, the city of lord Muḥammad, where are gathered the believers; who, also, were of one mind in holding the doctrine of lord 'Abū 'Abdallāh, without either scepticism or idolatry, or betrayal of the mystery of 'Alī 'Ibn 'Abū Ṭālib, or rending any veil of his, or seeking converse with him otherwise than through a Communicator—may he give to believers safety, tranquillity, strength, superiority over their enemies and ours, and vindication! and may he make us to be believers with them, safe, tranquil, secure, superior over our enemies and theirs, and vindicated! By the mystery of victory, and of him whose is victory, whose right hand secures the victory; by the mystery of our lord Muḥammad, and of Fāṭir (that is, says our author, of Fāṭimah), 'al-Ḥasan, 'al-Ḥusain, and Muḥsin; in the faith of the Mystery of Obscurity, of the representatives of prayer,† and of the multitude of the possessors of divine knowledge—peace be to us from the remembrance of them, and may God's benediction rest upon them all!”—

السورة الخامسة واسمها الفتنج

إذا جاء نصر الله والفتنج ورأيت الناس يدخلون في دين الله أفواجا
فسبح بحمد ربك واسنعه أنه كان نوابا أشهد بان مولاي أمير الدحل
على اخترع السيد محمد من نور ذاته وسماه اسمه ونفسه وعرشه وكوسيته
وصعاته متصل به ولا منفصل عنه ولا متصل به بحقيقة الاتصال ولا منفصلا
عنه في مبادعة الانعصال متصل به بانور منفصل عنه بمشاهدة انظهور فهو

* See Zeitschrift d. D. M. Gesellschaft, ii. 393.

† See first note to the Third Chapter

منه كحس النفس من النفس او كشعاع الشمس من القرص او كدوى الماء من الماء او كالفتق من الرق او كلعق البرق من البرق او كالنظرة من الناظر او كالحركة من السكون فان شاء على ابن ابي طالب بالظهور اظهره وان شاء بالغييب غيبه تحت ثلالي نوره واشهد بان السيد محمد خلق السيد سلمان من نور نوره وجعله بابه وحامل كتابه فهو سلسل وسلسبيل وهو جابر وجبرائيل وهو الهدى واليافين وهو بالحقيقة رب العالمين واشهد بان السيد سلمان خلق الخمسة الابتام الكرام فانهم اليتيم الاكبر واللوكب الازهر والمسك الادثر والياقوت الاحمر والزمرّد الاخضر المغداد بن اسود الكندي وابو الذر الغفاري وعبد الله بن رواحة الانصاري وعثمان بن مضعون النجاسي وفذير بن كادان الدوسي ثم عبيد مولانا امير المؤمنين لذكرة الاحلال والنعظيم وهم خلفوا هذا العالم من منارات الشمس الى معاربها وفيلنها وشمالها وبرها وبحرها وسهلها وحبلها ما حاضت الخضراء وحات الغرباء من حابلها انى جابرها الى مراصد الاحفاف الى جبل نف الى ما حاطت به قبة الفلك الدوار الى مدينة السيد محمد السامرة الى اجتماع فيها المؤمنون وانفقوا على راي السيد ابي عبد الله ولا يشكون ولا بشركون ولا في سرّ على ابن ابي طالب يبيحون ولا يخفون، له حاجبا ولا بدخلون اليه الا من باب اجعل المؤمنين مؤمنين ومؤمنين ومؤمنين وموتدس مجبورين على اعدائهم واعداينا منصورين واجعلنا بجلهم مؤمنين مؤمنين ومؤمنين مستورين مجبورين على اعدائنا واعدايهم منصورين بسرّ الفتج ومن فتج الفتج ومن كان الفتج على يده اليمين بسرّ سيدنا محمد وافرّ والحسن والحسين ومحسن سرّ الخفي واشخاص الصلوة وعدّه اعارفين علينا من ذرّهم السلام صلوة الله عليهم اجمعين —

The leaders among the Nusairis understand this chapter to signify that Muḥammad is connected with 'Alī by night, and separate from him by day, taking the sun to be Muḥammad الخاصة تعرف من هذا الفصل أن محمداً متصل بعلي ليلاً ومنفصل عنه (نهاراً) ويعنون أن الشمس هي محمد، and they believe that Muḥammad created lord Salmân; and these three are their Most Holy Trinity, 'Alī being the Father, Muḥammad the Son, and Salmân 'al-Fârsî the Holy Ghost (ثم اثلاثوا افدس فعلى عندهم)

(هو الـاب ومحمد الـابن وسلمان الفارسي هو الروح القدس); and they also declare that lord Salmân created the Five Incomparables, and that the Five Incomparables created this whole world, as it now exists, and that all the government of the heavens and the earth is in the hands of these Five Incomparables—'al-Mikdâd presiding over thunder-bolts, lightning-flashes, and earthquakes; 'Abu-dh-Dharr superintending the gyration of the stars and constellations; 'Abdallâh Bin Rawâhah being charged with the winds, and with the arrest of human spirits—whom they believe to be the same as 'Azrâ'il—'Uthmân having charge of stomachs, the heat of the body, and human diseases; and Kanbar being the introducer of spirits into bodies (فالمعداد موكل بالروح والصواعق)

والرلزل وابو الذر موكل بدوران النواكب والنجوم وعبد الله بن رواحة موكل بالرياح وبعض ارواح البشر ويعتقدون بانه عزرايل الذي باخذ الارواح. واما عثمان فهو موكل بالمعدة وحرارة الحسد وامراض الانسان واما (عندهم) فهو يدخل الارواح في الاجسام.

"Sixth Chapter, called the Bowing of the Head.

"Omnipotent is God! omnipotent is God! omnipotent is God! To God let there be bowing of the head, to the Supreme Lord with the bald temples, to the adorable! O my lord, O Muhammad, thou creator, thou conqueror, thou light of the august Archetypal Deity, and his noble Intermediary, of thee I implore aid. I am afflicted in this my abode; to thee I betake myself. Deliver me from the punishment of Hell, O glorious one, O mighty, O potent, O victorious, thou creator of the night and the day. Towards God, the light of the heavens and the earth, the Great Supreme, we set our faces; to him we point—let him be glorified and magnified! To the Communicator I address myself, to the Expressed Deity I bow the head, to the Archetypal Deity I render adoration and worship. My perishing, dying face prostrates itself before the face of 'Ali, the living, the enduring, the everlasting. O 'Ali, thou great one, O 'Ali, thou great one, O 'Ali, thou great one, O thou who art greater than all the great, thou producer of the morning-sun, and creator of the luminous full moon, O 'Ali, to thee pertains glory, to thee unity; O 'Ali, thine is the kingdom; O 'Ali, greatness is thine; O 'Ali, to thee all things point. O 'Ali, to thee is obedience due; it is thou, O 'Ali, who art to be interceded with; O 'Ali, thou hast creative power; O 'Ali, thine is destiny; thou, O 'Ali, wert the dignity of the cow.* Save us, O 'Ali, save us, O 'Ali, from thy wrath and chastisement, from the loss of thy complacency! I believe in thine incomensurateness, and thine unequalled working; thou, O Prince of Bees, art exalted above the possibility of weakness. I believe in, and acknowledge, thy hidden being, and thine outward manifestation: thine outward manifestation is mine Imâm and an ordained rule, thy hidden

* See p 245

being is archetypal and divine. O thou who art he, thou who art he, thou who honorest them who honor and remember thee, and confess thee sole; O thou who art he, thou who art he, thou who dost cause those to stumble who undermine thine authority, who disown and deny thee; O present one, O self-existent, O mysterious, O incomprehensible, O Prince of Bees, O 'Alí, thou august one"—

السورة السادسة واسمها السجود

الله اكبر الله اكبر الله اكبر لله السجود للربّ العلى الانزع المعبود يا سيدى
يا محمد با فاطر يا قاهر با نور المعنى العظيم و حجابك الكريم بك استعنت
اعتى بهذا الدار وبك استنجرت اجرنى من عذاب النار با عزى يا جبار يا
قادر يا قهار يا خالق الليل والنهار الله نور السماوات والارض وهو العلى
اللبير اليه نقصد ونشير وعز وجل للباب فصدت وللسم سجدت وللمعنى
عبدت وسجدت وسجد وجهى الفانى البالى لوجه على الحى الهدايم الباقي
با على يا كبير يا على يا كبير يا اكبر من كل كبير نا
مخضع شمس الضحى وخائف البدر المنير با على لك العزة با على لك
الوحدة با على لك الملك با على لك الكبرياء نا على لك الاشارة با على
لك الساعة يا على لك الشفاعة نا على لك العطرة يا على لك العذرة
با على انت سورة البقرة امانك يا على امانك من سخطك وعذابك من
بعد رضوانك امنت بمجزوك ومعجزك وجللت يا امير النحل عن النجس
ان يفع بك امنت وصدقت بباضنك وضاهرك وضاهرك امانى ووصية
وباضنك معنوى لاهوت با هو با هو با معز من اعرك وذكرك وافردك با هو
يا هو با منزل من ارتك وانكرت و تحددك يا حاصر يا موجود با غيبا لا
يدرك يا امير النحل يا على يا عظيم —

The word "Bees," in the expression "Prince of Bees," signifies the angels.

The Northerners pride themselves in this chapter as adverse to the worship which the Kalâzians render to the moon, arguing from the expression "thou producer of the morning-sun, and creator of the luminous full moon," that the moon is a created thing; to which the Kalâzians reply that 'Alí created the moon in order to inhabit it, as a man builds a house to dwell in, or makes a seat to sit upon (ان على خلق القمر ليسكن فيه كالرجل) for the lat-

ter hold that the dark part of the moon represents the Adorable, who, they also believe, has hands, feet, a body, and a head, and on his head a crown, and in his hand a sword, which is the notched blade of Muḥammad (لأنهم يعتقدون بأن السواد الذي في القمر هو المعبود وله يدان ورجلان وبدن وعلى البدن رأس وعلى رأس (ناج) وببده سيف هو ذو الفقار).

"Seventh Chapter, called the Salutation.

"I bow the head, and salute, and present myself to, the creator of the heavens and the earth, in devout homage and submission; and am no idolater. The beginning of salutation was by the eternal Archetypal Deity to the august Expressed Deity; and the august Expressed Deity saluted the noble Communicator; and the noble Communicator saluted the Five Incomparables, the pillars of the world and of religion. Salutation to the Communicators! salutation to the Incomparables! salutation to the Pursuivants! salutation to the Dignitaries! salutation to the Familiars! salutation to the Purified! salutation to the Approved! salutation to the Offerers! salutation to the Cherubs! salutation to the Spirituals! salutation to the Sanctified! salutation to the Ramblers! salutation to the Listeners! salutation to the Attendants!—who together make up the orders of angelic being—may the world of all the pure be sanctified! Salutation to those who follow the directing rule, and are guided, who stand in fear of the various ends of the wicked, obey the Supreme Sovereign, the Most High, and believe in the lordship of Muḥammad, the elect! Salutation to the hundred thousand prophets, and to the four and twenty thousand prophets, of whom the first was a Communicator, and the last was an Attendant! Salutation to you, O virtuous servants of God!—may God gather our dispersed, and yours, in the garden of Delight, amid the stars of heaven!"—

السورة السابعة واسمها السلام

سجدت وسلمت ووجهت وجهي لخالق السموات والارض خيفاً مسلماً وما
انا من المشركين بدء السلام من المعنى انقدم على الاسم العظيم وسلم
الاسم العظيم على الباب الكريم وسلم الباب الكريم على الخمسة الايتام اركان
الدنيا والدين السلام على الابواب السلام على الايتام السلام على النقباء
السلام على المناجيباء السلام على المختصين السلام على المخلصين السلام
على المختصين السلام على المقربين السلام على الثروبين السلام على
الروحانيين السلام على المقدسين السلام على الساجدين السلام على
المتسمعين السلام على اللاحقين فهم اهل المراتب يتقدس عالم الصفاء
احميين السلام على من اتبع الهدى واحتدى وخشى من عوافب الرداء
واضاع الملك العلى الاعلى واقر برؤيته محمد المصطفى السلام على المائة

الف نبى وأربعة وعشرون الف نبى أولهم باب وآخرهم لاحق السلام عليكم
يا عباد الله الصالحين جمع الله شملنا وشملكم فى أحتة النعيم بين الكواكب
السمائين

This chapter gives rise to dispute between the Northerners and the Kalâzians; for while the former say, "and believe in the lordship of Muhammad, the elect," the Kalâzians say: "in the lordship of 'Alî, the gracious," and accuse their opponents of the error of ascribing lordship both to Muhammad and to 'Alî, indifferently. The Northerners reply to this charge by saying that Muhammad and 'Alî are allied, not alien, to one another; that, while the First Cause is 'Alî, Muhammad, also, is a creator; and that the Kalâzians cannot consistently charge them with error in ascribing lordship to the latter, inasmuch as they themselves maintain the same doctrine of a Trinity which is held by the Northerners (من هذه السورة يقع الجدل بين الشماليين والالارية لان الشماليين يقولوا وافر بر بوبية محمد المختلفى والالارية بر بوبية على ائمتضى ونقول الالارية للشمالية اخذناهم باعقادهم بالبر بوبية ناره فحمد وناره لعلى فحبيب الشماليين ان محمدا وعليهما متصلان ببعضهما لهما منفصلان وان الغانة انبرى على ومحمد ايضا خالف ولو اعقدنا بر بوبية فلا تخلف لان اعمقادا واعقادكم بالتالوث (واحد). A long dispute is thus carried on, of which we give only the outline.

The "orders" mentioned in this chapter are fourteen in number: the first seven including all from the Communicators to the Approved, numbering five thousand angels, who constitute what the Nusairis call the great light-world (العالم الكبير النورى), believing them to be referred to in the Kurân as the "seven heavens,"* and who are supposed to have existed before the creation of the world, and to be stars outside of the milky way ويعولون انها كانت قبل تكون العالم وهى الكواكب الموجوده خارج عن) (درب النبتان); and the other seven including all from the Offerers to the Attendants, numbering one hundred and nineteen thousand, who constitute the so-called little spirit-world (العالم الصغير), supposed to be what is intended by the "seven earths" in the Kurân,† and whom the Nusairis believe to be the stars of the milky way, or spirits purified from the flesh through their acknowledgment of 'AMS, and of every manifestation of the Deity from Abel to 'Alî 'Tbn 'Abû 'Tâlib (درب) ويعتقدون انها درب

* Kur., xliii 88.
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† Kur., lxx 12

التَّابَ، وَفِي الذِّينِ خَلَصُوا مِنَ الْبَشَرِ بِأَقْرَارِهِمْ بَعْثَ وَبِكُلِّ ظُهُورٍ مِنْ هَابِيلَ
 (أَلِي عَلِيٍّ ابْنِ أَبِي طَالِبٍ), agreeably to these words in the *Dîwân*
 of their lord, Shaikh 'Alî 'aṣ-Ṣuwayrî:

"Why dost thou not apprehend the parable of light? Lo, God proposes to us a plain parable: God is the light of the upper world, the heavens, and of the earthly world"—

هَلَا عَرَفْتَ أَمْتَلِ النُّورِ يَا أَذْ صَرَبَ إِلَهُ لَنَا جَلِيًّا
 إِلَهُ نَوْرِ الْعَالَمِ الْعُلُوبِ فِي السَّمَاءِ وَالْعَالَمِ الْأَرْضِيَا —

which parable is to be found in the *Kurân*, where we read:
 "God is the light of the heavens and the earth; his light is as a lamp in a little window etc."*

"Eighth Chapter, called the Betokening."

"Glory be to a God to whom all necks bow, to whom all obstacles and difficulties give way! I elevate the standard and token of the elect lord Muhammad, on the day of the festival of 'al Ghadir—grantly praised be he who stands high before God in nobleness and dignity! I, a servant to them who point to thee, O Prince of Bees, O 'Ali, thou august one, by the confession of unity, abasement of self, acquittal of all evil, and recognition of thine absolute being, O 'Ali, thou august one, thou who art from everlasting, eternal, O creator and judge—I entreat thee, by the reality of the call wherewith lord Muhammad called upon thee, as he went out of the gate of Makkah, riding the white camel, and cried, saying: 'A combat! a combat! a fight! a fight in the cause of God!' which words are my token to thee, O light of light, thou render of rocks, thou compeller of seas, thou disposer of all things—I entreat thee that thou wouldst give to believers a home in thy sublime garden, kept by Ridhwân—O the felicity of a humble creature having hope thereof! But lo, from the face of the height, on the right side of the mount, from amid the blessed tree, the bounteous one calls out, and says: 'O my friend, O worthy to be praised, what humble creature has ever invoked me with this invocation, in sincerity of heart, and simple confidence, either on Thursday the 15th of the month Nisân, or the evening of Friday, or on the night of the 15th of Sha'bân, or on five nights of the month Ramadhân, or on the Day of the Mass, or on the Birth-night, or on the day of the festival of 'al-Ghadîr, and I have not counted him as one of my people, and given him a home in my garden, causing him to drink of the cup of my mercy, and placing him among the believers, for whom there is no fear, and who know no sadness?' I have uplifted my token. By the mystery of the 'Ain of 'Ali, by the mystery of the Mîm of Muhammad, by the mystery of the Sîm of Salsâl—by the mystery of 'AMS. Our beginning of invocation is that we betoken our Archetypal Deity, and say: In the name of God, the merciful, the compassionate; and our ending of invocation is that we render thanks to him who has guided us, and say: Duty and praise be to God, the Lord of all worlds!"—

* *Kur.*, xxiv. 35.

السورة الثامنة واسمها الاشارة

سبحان الله خضعت له الرقاب وذلت له الامور الشداد الصعاب فقد ارتفع
 القصد والاشارة من السيد محمد المصطفى في يوم عيد الغدير خم الذى
 شرفه وفصله عند الله مقام عظيم انا عبد من المشيرين اليك يا امير المحل
 يا على يا عظيم بالتوحيد والتقريب والتنزيه والتجريد لك يا على يا عظيم
 يا ازل يا قديم يا بارى يا حكيم اسألك بحق الدعوة الى دعاك بها السيد
 محمد وهو خارج من باب مكة وراكب المطية البيضاء وهو بنادى ونقول
 الجهاد الجهاد الحراب الحراب فى سبيل الله وهذه اشارى اليك يا نور النور
 يا فالف الصخور واجر الجور ومدير الامور بان تسكن المؤمنين فى
 جنتك العليا التى رصوان خازنها ويا فوز عبد رجاها فاذا بالندى من
 قبل العلا من جانب الطور الايمن من الشجرة المباركة ينادى ويقول يا
 حبيبى يا محمد اى عبد دعانى بهذه الدعوة بصفو قلبه وخالص دفينه
 نهار الخميس النصف من نيسان او عشية الجمعة او ليلة النصف من شعبان
 او فى خمس ليالى من شهر رمضان او يوم العداس او ليلة الميلاد او يوم
 عيد الغدير الا وجعلته من امنى وسكنته جنتى واسقيه بكاس رحمتى
 واجعله مع المؤمنين الذين لا خوف عليهم ولا هم يحزنون رفعت اشارتى
 بسر العبن العلوية بسر الممى المحمدية بسر السنين السلسلية بسر عمس
 اول دعائنا نشير لعنا ونقول بسم الله الرحمن الرحيم واخر دعائنا ننتكر من
 هداانا ونقول الحق الحمد لله رب العالمين —

The combating spoken of in this chapter is two-fold: 1. to revile 'Abû Bakr, 'Umar, 'Uthmân, and the rest, and all sects which maintain that 'Alî 'Ibn 'Abû Tâlib, or the prophets, either ate, drank, had sexual intercourse, or were born of women; for the Nusairis believe that these descended from heaven without bodies, and that the bodies which they inhabited were but semblances (لأن النصيرية يعتقدون بانهم نزلوا من السماء بدون اجسام) ; (وان الاجسام انى كانوا فيها انما هي اشباه وليسست هي بالحقيقة اجسام) ; 2. to hide one's religion from those who are not Nusairis, it being a principle with this sect not to disclose their opinions or usages, even to save their lives.

By this chapter are to be distinguished the four parties among the Nusairis; for those who adore the heavens and the twilight,

when they recite it, place the right hand upon the breast, applying the inner part of the thumb to the middle finger; while among the worshippers of the moon some spread out the hand, with the thumb erect, so that it has the shape of the new moon, and others place both hands upon the breast, opening them wide, with the fingers of one over those of the other, and the two thumbs erect, so as, in this way, to represent the shape of the new moon; and the worshippers of the air place one hand upon the breast, lifting up the fore-finger, and applying the inner part of the end of the thumb to the inside of the middle finger.

All Nusairis, on finishing the recitation of this chapter, kiss the inner part of the ends of their fingers three times, and raise them to their heads.

"Ninth Chapter, called the 'Ain of 'Ali.

"By the mystery of the 'Ain, pertaining to 'Ali, divine, manifested, of him with the bald temples; by the mystery of the Mim, pertaining to Muhammad, Hashimian, imperial, intermediary, of the sun's disk, light of light; by the mystery of the Sin, pertaining to Salsal, represented in Gabriel, of Salmân, communicatory, Bakrian, Numairian, Nusairian. By the mystery of 'Ain-Mim-Sin"—

السورة التاسعة واسمها العين العلوة

بِسْمِ الْعَيْنِ الْعُلْوَةِ الدَّائِنَةِ الظَّاهِرَةِ الْإِنْرَعِيَةِ بِسْمِ أَلِيمِ أَحْمَدِنَةِ الْهَاشِمِيَةِ
الْمَلَكُوتِيَةِ الْحَاجِبَةِ الْفَرْصِيَةِ الْنُورَانِيَةِ بِسْمِ السِّنِّ السَّلْسَلِيَةِ الْجَبْرَائِيلِيَةِ
الْإِسْلَامِيَةِ الْبَابِيَةِ الْبَكْرِيَةِ الْنُصَيْرِيَةِ بِسْمِ ع م س —

Sometimes abridged in the recitation.

"Tenth Chapter, called the Covenant.

"I testify that God is true; that his word is true; that 'the plain truth' is 'Ali 'Ibn 'Abû Tâlib with the bald temples, the mysterious; that Hell is the abode of unbelievers; that the Garden is a pleasure-ground for believers, where water meanders beneath the throne, and upon the throne is seated the Lord of all worlds, and the bearers of the throne are the noble Eight, who present to him the oblation of my exercises, in this my state of discipline, and of the exercises of all believers. In the faith of the mystery of the covenant of 'Ain-Mim-Sin"—

السورة العاشرة واسمها العقد

أشهد أن الله حق وقوله حق وأن الحق أئمين على ابن أبي طالب الأنزع
البطيين والنار مثوى للكافرين والجنة روضة للمؤمنين والماء من تحت العرش
يطوف وفوق العرش رب العالمين حمالة العرش الثمانية الأكرام الذين هم
اليه مقربون عدتني في شدة وعدة كافة المؤمنين سر عقد ع م س —

"Eleventh Chapter, called the Testimony, or, by the common people, the Mountain.

"God certifies, the angels, too, and all imbued with knowledge, bear witness, that there is no God beside him, the doer of justice; that there is no God beside him, the mighty, the wise. Verily, religion in God's sight is Islâm. O our Lord, save us by thy revelation, cause us to follow the Messenger, and so record us among those who firmly testify to 'Ain-Mim-Sîn. Bear me witness, O august Intermediary; bear me witness, O noble Communicator; bear me witness, my lord Mikdâd on the right hand; bear me witness, my lord 'Abu-dh-Dharr on the left; bear witness to me, O 'Abdallâh; bear witness to me, O 'Uthmân; bear witness to me, O Kanbar Bin Kâdân; bear witness to me, O Pursuivant; bear witness to me, O Dignitary; bear witness to me, O Familiar; bear witness to me, thou Purified; bear witness to me, thou Approved; bear witness to me, O Offerer, and thou Cherub, and thou Spiritual, and thou Sanctified, and thou Rambler, and thou Listener, and thou Attendant; bear witness to me, ye dwellers in the watch-towers, and O world of all the pure. I testify that there is no God but 'Alî 'Ibn 'Abû Tâlib with the bald forehead, the adorable; and no Intermediary but lord Muḥammad, worthy to be praised; and no Communicator but lord Salmân 'al-Fârsî, the pattern; and that the greatest of angels are the Five Incomparables; and that there is no counsel save that of our chief and lord 'al-Ḥusam Bin Hamdân 'al-Khusaibi, who made known our rites in all lands. I testify that the man-like form, manifested among men, was the summit of all existence, and that it made manifest the essential light, beside which there is no God, which is 'Alî 'Ibn 'Abû Tâlib; and that he is immeasurable, illimitable, incomprehensible, inscrutable. I testify that I am a Nusairî in religion, a Jandabî in counsel, a Junbulânî in habitude, a Khusaibi in doctrine, a Jalî as to maxims, a Maunûnî in legal science; and I stand fast in expectation of the splendid recurrence, the brilliant return, the withdrawal of the veil, the lighting up of the thick cloud, the manifestation of that which is unseen, the showing forth of the hidden, and the appearance of 'Alî 'Ibn 'Abû Tâlib from amid the sun, arresting every soul, with the lion beneath him, the Dhu-l-Fakâr in his hand, the angels behind him, and lord Salmân before him, while water wells up from between his feet, and lord Muḥammad cries out, saying: 'Behold your Sovereign, 'Alî 'Ibn 'Abû Tâlib! acknowledge him, glorify him, magnify him, exalt him. Behold your creator and provider! disown him not.' Bear me witness, O my lords, that this is my religion and my faith, whereto I commit myself, whereby I live, wherein I shall die. 'Alî 'Ibn 'Abû Tâlib lives, and will not die; in his hand is destiny, and absolute dominion; in his gift are hearing, seeing, and understanding. Peace be to us from the remembrance of them!"—

السورة الحادية عشرة واسمها الشهادة والعامّة تسميها الجبل

شهد الله انه لا اله الا هو والملائكة واولو العلم قايما بالفسط لا اله الا هو العزيز الحكيم ان الدين عند الله الاسلام ربنا آمتا بما انزلت واتبعنا الرسول

فاكتبنا مع الشاهدين بشهادة ع م س اشهد على ايها الحجاب العظيم
اشهد على ايها الباب الكريم اشهد على با سيدى المقداد اليميني اشهد
على يا سيدى ابو النذر الشمال اشهد على يا عبد الله اشهد على يا عثمان
اشهد على با فزبر بن كادان اشهد على با نفيب اشهد على يا نجيب
اشهد على با مختص اشهد على با مخلص اشهد على با متحن ويا
مقرب ويا كرونى ويا روحانى ويا معدس ويا سابح ويا مستمع ويا لاحق
اشهدوا على يا اهل المرافب ويا عالم الصفاء اجمعين اى اشهد بان ليس
الها الا على ابن اى طالب الاصلا المعبود ولا حجاب الا السيد محمد المحمود
ولا باب الا السيد سلمان الفارسى المفصود واكبر الملائكة الخمسة الايتام ولا
رأى الا رأى شيخنا وسيدنا الحسين بن حمدان الخصبى الذى شرع
الادبان فى سائر البلدان اشهد بان الصورة المربية التى ظهرت فى البشرية فى
الغاية الكلية وهى الطاهرة بالنورانية ولمس اله سواها وهى على ابن ابنى
طالب وانه لم يحاط ولم يحصر ولم يدرك ولم يصغر اشهد بانى نصيرى
الدين جندى الرأى جذبلانى الطربعة خصبى المذعوب جلتى افعال ميمونى
الفعه وافر فى الرجعة البيضاء والكره الرهراء وفى كشف الغطاء وجلاء العباء
واظهار ما كنتم واعلان ما خفى وظهر على ابن اى طالب من عين الشمس
قابض على كل نفس الاسد من تحته وذو انفعار بيده والملائكة خلعه والسيد
سلمان بين يديه وائماء يذع من بين قدميه والسيد محمد ننادى ويقول
هذا مولاكم على ابن ابنى طالب فاعرفوه وسبحوه وعظموه وكبروه هذا
خالعكم ورافكم فلا تنكروه اشهدوا على با اسيدى ان هذا دينى
واعفادى وعليه اعنمادى وبه احيا وعليه اموت وعلى ابن اى طالب حتى
لا يموت بيده الفدره والجمروت ان السمع والبصر والنعواد كل اولئك كان عنه
مسؤولا علينا من ذكرهم السلام تمت

The Kalâzians claim that expression "and the appearance of 'Alî 'Ibn 'Abû Tâiib from amid the sun," in this chapter, as evidence of the correctness of their doctrine, remarking that the moon comes forth to view out of the sunset-sky. The worshippers of the twilight, on account of this expression, fancy that the twilight comes forth from the midst of the sun, while,

at the same time, maintaining that the twilight-reddening of the sky creates the sun. The Northerners say that "the sun" is, here, a metonymy for Fâtimah the daughter of 'Asad, whose child was 'Alî 'Ibn 'Abû Tâlib; for it is the belief of the Nusairîs, universally, that both she and Fâtimah the daughter of Muhammad were the Expressed Deity, that is, Muḥammad, who, as they hold, is represented in the sun.

"Twelfth Chapter, called the Imâm-chapter.

"Bear me witness, ye brilliant constellations, ye luminous stars, ye circling spheres, that this man-like form, beheld and beholding, which was 'Alî 'Ibn 'Abû Tâlib, represented the eternal, the alone, the sole, the infinite, the uncompounded, in whom there is no distinction of parts, the indivisible, whom no number comprises. He, then, is my God, and yours; your God, and mine; my Imâm, and yours; your Imâm, and mine; the Imâm of Imâms, the light of darkness, Haidarah 'Abû Turâb, the manifested with the bald forehead, the hidden with the bald temples, the appearer from amid the sun, the arrester of every soul, to whom, to the grandeur of the glory of whose awfulness, and to the greatness of the splendor of the lightning of whose divinity—to whom all necks bow, and all difficulties give way. In the faith of the mystery of a Deity in the heavens, being an Imâm on earth; in the faith of the mystery of the Imâm of every Imâm; in the faith of the mystery of 'Alî 'Ibn 'Abû Tâlib, the everlasting; in the faith of the mystery of his Intermediary, lord Muḥammad, and of his Communicator, lord Salmân, gate to the directing rule and to the faith—pleasure and peace be to us from the remembrance of them!"—

السورة الثانية عشره واسمها الامامية

اشهدن على انها النجوم انوارها والكواكب النارية والافلاك الدائرة بان هذه الصورة المربية المعانده الناصرة هي على ابن ابي طالب العديم الاحد الغود الصمد الذي لا بجزاً ولا بتعبص ولا ينفسم ولا يدخل في عدد فهو الهى والهكم والهكم والهى امامى وامامكم وامامكم وامامى امام الاجمة وسراج الظلمة حيدر ابو تراب انظار بالاصلع الباشن بالانزع الطاهر من عين الشمس انقباص على كل نفس انذى له ولعظم جلال هيئته وكبرياء سنى بريق لاهونه تخضعت له الارقاب وذلت له الامور الصعاب سر انه فى السماء وهو امام فى الارض سر امام كل امام سر على ابن ابي طالب قديم الزمان سر حجاب السيد محمد وبابه السيد سلمان باب الهدى والايمان علينا من ذكرهم الرضى والسلام —

This chapter implies that the Nusairîs adore a seen, present, not an incommunicative, Deity; and that this Deity is 'Alî 'Ibn

يمان من هذه السورة أنهم يعبدون الها منظورا موجودا غير) 'Abû Tâlib (مفقود وهذا الاله هو على ابن ابي طالب, whom the Northerners believe to be presented to view in the whole heavens, and the Kalázians suppose to be the moon—each party, accordingly, interpreting the chapter to suit its own views.

“Thirteenth Chapter, called the Journeying-chapter.”

“Let whatsoever is in the heavens, and whatsoever is on the earth, glorify God, the mighty, the wise! With the return of morning do we give glory, with the return of morning doth God's whole realm give glory. In the name of God, by the help of God, and in the faith of the mystery of lord 'Abû 'Abdallâh, in the faith of the mystery of the chief and his peculiar children, drinkers from the sea of 'Ain-Mim-Sin, fifty-one in number (of whom seventeen were of 'Irâk, seventeen of Syria, and seventeen unknown), stationed at the gate of the city of Harrân, receiving justly and rendering justly, whose religion whosoever conforms to, and whose worship whosoever adopts, God brings him to the knowledge of himself; and whose religion whosoever does not conform to, and whose worship whosoever does not adopt, has God's curse upon him. By the mystery of the chief and his peculiar children; by their mystery—may God give happiness to them all!”—

السورة الثالثة عشرة واسمها المسافرة

سَبَّحَ لَهُ مَا فِي السَّمَاوَاتِ وَمَا فِي الْأَرْضِ وَهُوَ الْعَزِيزُ الْحَكِيمُ اصْبَحْنَا وَصَبَّحْنَا
وَاصْبَحَ الْمَلِكُ لَهُ وَسَبَّحَ الْمَلِكُ لَهُ بِسْمِ اللَّهِ وَبِاللَّهِ وَسَيَّرَ أُنْسِيْدَ إِلَى عَبْدِ اللَّهِ سَيَّرَ
الشَّيْخَ وَأَوْلَادَهُ الْمُخْتَصِمِينَ الشَّارِبِينَ مِنْ بَحْرِ عَمَّ سَ فِهِمْ وَاحِدٌ وَخَمْسُونَ
مِنْهُمْ سَبْعَةٌ عَشْرٌ عَرَفِيًّا وَسَبْعَةٌ عَشْرٌ سَامِيًّا وَسَبْعَةٌ عَشْرٌ ثَمُعِيٌّ وَهُمْ وَأَفْقُونَ
عَلَى بَابِ مَدِينَةِ حَرَّانَ يَأْخُذُونَ بِالْحُفِّ وَيَعْطُونَ بِالْحُفِّ وَمَنْ يَنْدُبُنَّ
بَدِيَانَتِهِمْ وَيَعْبُدُ عِبَادَتَهُمْ وَفَعَهُ اللَّهُ إِلَى مَعْرِفَتِهِ وَمَنْ لَا نَنْدُبُنَّ بَدِيَانَتَهُمْ
وَلَا يَعْبُدُ عِبَادَتَهُمْ فَعَلَيْهِ لَعْنَةُ اللَّهِ بِسَرِّ الشَّيْخِ وَأَوْلَادِهِ الْمُخْتَصِمِينَ بِسَرِّهِمْ
أَسْعَدَهُمُ اللَّهُ أَجْمَعِينَ —

When the Nusairis find mention made, in their secret books, of any city, they interpret it figuratively, as signifying the heavens, and suppose its inhabitants to be stars, agreeably to what is explicitly laid down in the Egyptian Missive, and other books أن النصيرية عندما يرون ذكر مدنته في كتبهم الباطنية فيقولون لها على السماء وينعمون أن سكانها هم الكواكب كما يوجد ذلك مصرحا في (الرسالة المصرية وغيرها); and so it is with “the city of Harrân” spoken of in this chapter. As for the chief here mentioned, he is their lord 'al-Khusaibî, and the fifty-one are his disciples (some of whom were of 'Irâk, some of Syria, some of Persia,

and some of foreign birth), whom the Nusairis believe to be stars of the order of "the little spirit-world." The signification attached to the receiving and rendering justly, attributed to these fifty-one, is that, whosoever takes refuge with them, and offers sacrifices to their Expressed Deity, him they will meet, and purify, and receive into their midst; and that they will avenge themselves upon all who distrust them, and will cast their spirits into mansions of degrading transformation (ومعنى اخذهم بالحق واعطائهم هومن استسنع بهم وبقرب ذبايح لاسمهم يداكونه وخلصونه ويأخذونه الى بينهم والذى يكفر بهم بنفهم منه وبولجونه (روحه في هياكل المسوخية).

"Fourteenth Chapter, called the Reverenced House.

"By the mount, by a book written on an unsealed roll, by the reverenced house, by the lofty roof, by the full sea, by the mystery of Tālib, 'Akil, and Ja'far 'at-Taiyār, brothers of 'Alī 'Ibn 'Abū Tālib, who is the light of light, the substance of substance; by 'Alī 'Ibn 'Abū Tālib, remote from brothers, sisters, fathers, and mothers, alone, infinite, self-existent, hidden yet unclothed; in the faith of the mystery of the house, the roof of the house, the ground of the house, and the four under-pinnings of the house—the house being lord Muḥammad, the roof Abū Tālib, the ground Fātimah the daughter of 'Asad, and the four under-pinnings Muḥammad, Fātir, 'al-Ḥasan, and 'al-Ḥusain; in the faith of the mystery of the obscure and secret nook in the midst of the house, which is Muḥsin, Mystery of Obscurity; in the faith of the mystery of the exalted, illustrious, Hāshimian master of the house, who crushes horns of power, and breaks idols in pieces—pleasure and peace be to us from the remembrance of him!"—

السورة الرابعة عشرة واسمها البيت المعجور

والطور وكناب مستطور فى رقى منشور والبيت المعجور والسقف المرفوع
والبحر المسجور بسرّ ضالّ وعفيل وجعفر الطيّار ثم اخوة على ابن ابي
ضالّ نور من نور وجوهر من جوهر وعلى ابن ابي ضالّ منزّه عن الاخوة
والاخوات والاباء والامهات احدا ابدا موجود بانفس بغير غمود سرّ البيت
وسقف البيت وارص البيت واربع اركان البيت اما البيت فهو السيد
محمد وشقف البيت ابو ضالّ وارص البيت فاضمة بنت اسد واربع
اركان البيت هم محمد وفاتر والحسن والحسين سرّ الزاوية الغامضة الخفية
التي هي في نصف البيت هي محسن سرّ الخفى سرّ صاحب البيت العلوى
الشريف الهاشمى الذى هشم القرون وكسر الاصنام علينا من ذكره الرضى
والسلام —

This chapter originated with the primitive Nuṣairīs, and was made up in the way of accommodation to the performance of pilgrimage, that is to say, in view of the house which the Kurân commands to visit, and its under-pinnings, roof, and enclosures, as signifying, metaphorically, an acquaintance with persons represented thereby, agreeably to what is said by Shaikh 'Ibrâhîm 'at-Ṭūsî, in his Poem of the Letter 'Ain:

"O the change of God's house! which is his Intermediary; of 'as-Safâ! which is 'al-Mikdâd, tamer of the Adversary; of Marwah! whereof 'Abu-dh-Dharr is the memorable personation; of the ceremonies of the house! which are Salsal, submissive to the Deity; its enclosing steps, how changed do they present themselves! the door-ring of the house is Ja'far, star in the ascendant!"

The house signifies the Lord Intermediary, the Mîm; 'as-Safâ, 'al-Mikdâd; the two steps, 'al-Ḥasan and 'al-Ḥusain; the door-ring, acquaintance with Ja'far 'as-Sâdîk; 'al-Marwah, acquaintance with 'Abu-dh-Dharr; and the sacred place of ceremony, acquaintance with Salmân 'al-Fârsî (هذه السورة قد رتبها) أعلم ان سلعاءهم ثابته المحتج وهو ان الثابت المأمور في القرآن وزارته واركاب البيت وسعده وحيدانه هو كتابة عن معرفته أولئك الاختصاص دعول النسيج ابراهيم الطوسي في عينينه

أما انصفى انعداد للصد فامع
 • ومروة مذکور ابو الذر شخصها
 • وعقبانه الحات اما قلب شخصها
 البيت هو الحجاب السد الميم وانصفى هو المعداد والعنيمان بما الحسن
 والحسين وحلقة الماب هي معرفه جعفر انصاف والمروة معرفه ابي الذر
 (والمسعر الحرم معرفه سلمان الفارسي). Such interpretations are distinctly presented in very many books of the Nuṣairīs; and an acquaintance with the several persons named stands, with them, for the completion of pilgrimage. Moreover, that acquaintance is understood by the Nuṣairīs to be obtainable by sight, in conformity with what is their belief, universally, that the sun is Muḥammad; while, as to their disagreement with respect to the Archetypal Deity and the Communicator, the leaders among the Kalâzians hold the moon to be the Archetypal Deity, which, as the Northerners maintain, represents Salmân 'al-Fârsî, and, on the other hand, the leaders among the Northerners believe the Archetypal Deity to be presented to view in the whole heavens, which the Kalâzians hold to represent the Communicator Salmân 'al-Fârsî; and so every one who becomes initiated

into the sect assigns to the Archetypal Deity and the Communicator, respectively, their representatives, as maintained by whichever party he joins (بالتزوية كاعتقاد) ومعنى معرفتهم أى أن تكون بالرؤية كاعتقاد) والتصيير كإله أن الشمس في محمد ولا يقع الاختلاف سوى بالمعنى والباب فخاصة الكلازنية يعتقدون بأن القمر هو المعنى وأما الشمالية فيعتقدون بأنه سلمان الفارسي وخاصة الشمالية تعتقد بأن السماء هي المعنى على ابن أبي ضائب وأما الكلازنية فيعتقدون بأنها الباب سلمان الفارسي وكذلك شركاءهم كل منهم بعسر هذين الشخصين أى المعنى والباب كما يوافق (اعتقاد مذهبه).

The zeal of the Muslims in visiting Makkah seems to the Nusairis idle and blameworthy; and one of their chiefs has expressed himself to this effect in the following words:

"Cursed be all who forbid the drinking of wine, and all the Syrians, and the pilgrims!"—

ولعد لعنت لمن حرم شربها وجميع أهل الشام وأحجاج

that is to say: O for the knowledge of 'Am-Mîm-Sîn! and their lord Muḥammad Bin Nuṣair 'al-'Abdî 'al-Bakrî 'an-Nuṣairî censures pilgrimage in the first of his Three Numairian Visitations, which we find in the Book of the Summary of Festivals,* as follows:

"They have assigned to thee a grave, and suppose thee to be buried in it, and visit thee; but in truth they practise deceit"—

جعلوا لك قبرا وضنوا بانك فيه مدفون وهم يزورونك ولكنهم بالحق كاذبون —

and, again, it is said in the Book of Confirmation, by Shaikh Muḥammad 'al-Kalâzî, quoting from the Book of Light Handling,† which the Nusairis believe to have been composed by Ja'far 'as-Sâdhî, the words of Ja'far, when he was inquired of by 'al-Mufaḍḍhal with reference to the edifice which the Muslims are so zealous in visiting, imagining it to be God's house:

"Such visitation is the sum and substance of unbelief; that edifice is a prop of idols, even as it is of stone, like idols; and people are well nigh dolts in visiting it, and short of understanding;"

to which 'al-Kalâzî adds:

* See Journ. Asiat, iv^e Série, xi. 153.

† In the original text, this title here reads كتاب البهجة, which we have altered, in conformity with the reading in another passage where it occurs, to كتاب البهجة. The meaning of the latter form, however, is doubtful.

"So I give them for answer, as to this matter, that the practice should be abandoned; and besides, there are places of pilgrimage, and trees, innumerable, which they may visit, nearer than the Ka'bah: so idle a proceeding verifies in them the words of the poet, who says:

'Thou boastest, O my brother, of strange things: of a jaundiced physician administering to his fellow-men; of a weaver who is always naked of clothing; and of an oculist prescribing collyrium, who is himself blind;'

and those of another:

'The physician sets himself to administer to others, and forgets his own pain-stricken heart'—

وأيضا بكتاب التأييد للشيوخ محمد النلاري أن يستند على كتاب الهفت
الذى يتهمون بتأليفه جعفر الصادق حيث يقول أن المفضل سأل جعفر
الصادق عن هذه البناية التى بسعى اليها المسلمون ضائين أنها بيت
الله فاجابه الصادق انه هذا رأس النفر وفي آله الاصنام لأنها حجارة كالاصنام
وبسعون اليها بالفرايين من ضعف عقلم وقلة فهمهم فاجيبهم عن ذلك
انهم ينهون عن هذا العمل وعندهم زارة ما هو ادنى منها أى المنارات
والاشجار الى لا يحصى عددها وبهذا بصدق قول الشاعر العاليل
تفكرت با اخى فى امور عجيبة يحكمم بدادى الناس وهو اصغر
وحياك عريان من اللبس دايم وكحال بوصف كحلا وهو اعور
وقال غيره

شرح الطبيب بان بدادى غيره ونسى انطبيب فواده بنوجع —

"Fifteenth Chapter, called the Chapter of the Intermediary."

"In the faith of the mystery of the august Intermediary; in the faith of the mystery of the noble Communicator; in the faith of the mystery of my lord 'al-Mikdād, on the right hand; in the faith of the mystery of my lord 'Abu-dh-Dharr, on the left hand; in the faith of the mystery of the two noble, pure, potentates, 'al-Hasan and 'al-Husain; in the faith of the mystery of the two saints, Naufal Bin Hārithah and 'Abū Burdah; in the faith of the mystery of 'as-Safā and the world of purity; in the faith of the mystery of every star in the heavens; in the faith of the mystery of the sublime holiness, and of those who dwell therein—pleasure and peace be to us from the remembrance of them!"—

السورة الخامسة عشرة واسمها التجابية

سرّ الحجاب العظيم سرّ الباب الكريم سرّ سيدى المقداد اليمين سرّ سيدى
ابو اندر الشمال سرّ الملكين الكريمين الطاهرين هما الحسن والحسين سرّ

الْوَلِيِّينَ هَا نُوْفَلُ بْنُ حَارِثَةَ وَأَبُو بَرْدَةَ سَرَّ الصَّفَى وَعَالَمُ الصَّفَى سَرَّ كُلَّ كَوْكَبٍ
فِي السَّمَاءِ سَرَّ فِدَسَ الْعُلَى وَسَكَانَهُ عَلَيْنَا مِنْ ذَكَرِهِمُ الرِّضَى وَالسَّلَامُ تَمَّ

"Sixteenth Chapter, called the Chapter of Pursuivants."

"They rove about far and wide—is there any place of refuge for them? Let us remember the names of the Pursuivant-lords, whom lord Muḥammad chose from among the seventy men, on the night of 'al-'Akabah, in the valley of Minā, as follows: 'Abu-l-Haitham Māhik 'Ibn 'at-Taiḥān 'al-'Ushhulī, 'al-Barā 'Ibn Ma'ūr 'al-'Anṣārī, 'al-Mundlār Bin Lūdān Bin Kannās 'as-Sā'idī, Rāfi' 'Ibn Mālik 'al-'Ajlānī, 'al-'Asad Bin Ḥusain 'al-'Ushhulī, 'al-'Abbās Bin 'Ubādah 'al-'Anṣārī, 'Ubādah Bin Ṣānīt 'an-Naufalī, 'Abdallāh Bin 'Umar 'Ibn Ḥazzām 'al-'Anṣārī, Sālim Bin 'Umayr 'al-Khazraji, 'Ubai 'Ibn Ka'b, Rāfi' Bin Warākah, Bilāl Bin Raiyah 'ash-Shanawī. In the faith of the mystery of the Pursuivant of Pursuivants, and the Dignitary of Dignitaries, our lord Muḥammad Bin Sinān 'az-Zāhiri—pleasure and peace be to us from the remembrance of them!"—

السُّورَةُ السَّادِسَةُ عَشْرَةُ وَأَسْمَاءُ النُّقِيبِيَّةِ

فَنَقَبُوا فِي الْبِلَادِ هَلْ مِنْ مَحِيصٍ نَذَكِرُ أَسْمَاءُ أَسَادَةِ النُّقَبَاءِ الَّذِينَ
اخْتَارَهُمُ السَّيِّدُ مُحَمَّدٌ مِنَ السَّمْعَيْنِ رَجُلًا فِي لَيْلَةِ الْعَقَبَةِ فِي وَادِي مَنْأَى
أُولَهُمْ أَبُو الْيَثْمَرِ مَالِكُ ابْنِ الْنَيْهَانِ الْأَسْهَلِيُّ وَالْبِرَاءُ ابْنُ مَعْرُورِ الْأَنْصَارِيِّ
وَالْمَنْصُورُ بْنُ لُودَانَ بْنِ كُنَاسِ السَّاعَرِيِّ وَرَافِعُ بْنُ مَالِكِ الْعَجْلَانِيِّ وَالْأَسَدُ
بْنُ حَصْبَنِ الْأَشْهَلِيِّ وَالْعَبَّاسُ بْنُ عَبَادَةَ الْأَنْصَارِيِّ وَعَبَادَةُ بْنُ صَامَتِ النَّوْفَلِيِّ
وَعَبْدُ اللَّهِ بْنُ عَمْرِو بْنِ حَزَامِ الْأَنْصَارِيِّ وَسَاهِبُ بْنُ عَمِيرِ الْحُزْرَجِيِّ وَأَبَى ابْنِ
كَعْبٍ وَرَافِعُ بْنُ وَرْقَةَ وَبِلَالُ بْنُ رَبَّاحِ الشَّنَوِيِّ سَرَّ نَقِيبِ النُّقَبَاءِ وَنَجِيبُ
النُّجَبَاءِ سَيِّدُنَا مُحَمَّدُ بْنُ سِنَانِ الزَّاهِرِيِّ عَلَيْنَا مِنْ ذَكَرِهِمُ الرِّضَى وَالسَّلَامُ —

These forms of devotion are used by all classes among the Nuṣairīs, and by all the four parties into which the sect is divided, each party, however, interpreting them, after the manner which has been illustrated, agreeably to its own peculiar views. But the Nuṣairī-women are not taught any of these forms, being restricted to the so-called Chapter for the Removal of Sexual Uncleanness (سورة رفع الخنابة), a form of worship which is also used by the other sex. This chapter brings to view no new point in the Nusairian system of belief, and is, indeed, as might be expected, quite vague in its doctrinal allusions, while its whole significance is more impure than purifying. For these reasons, we shall not dwell upon it longer than to extract, for the sake of not altogether omitting anything.

characteristic, so much of the text as has been allowed to be printed :

مديت يمدى الى هذه الماء الحارة الهادبة المهدبة التى جداها ردها من
درة الى درة الى فائضة الزهراء شلفت شلقة على جنبى اليمين توكلت على
على امير المؤمنين شلفت شلقة على جنبى اليسار توكلت على العزير
الحبار شلفت شلقة على رأسى يا رضى رب الناس ترفع عنى هذه النجاسة
من . . . الى رأسى وجميع معاصلى ستم فرس كما رفعت السماء عن
الارض شلفت شلقة الى خلف توكلت على العمر والشمس شلفت شلقة الى
فدام توكلت على النربا والمبران شلفت شلقة على . . . الذى هو
بسخن فلان وفلان وفلان —

We come now to the second section of our tract, فى الاعياد, relating to the festivals of the Nusairîs. The author remarks that these annual celebrations had an ancient origin, and are carefully perpetuated; that the necessary expenses are borne by the wealthier men of the sect, every rich Nusairî binding himself to defray the cost of one, two, or three of the celebrations, according to the measure of his zeal; and that, in towns, they are held at evening, for the sake of secrecy, but that this precaution is not observed in villages. It is also stated that the Nusairî-villagers give themselves up to special festivity on their New-year's day, the 1st of Second Kânûn, or January, and show less regard for certain seasons observed with special ceremonies among the Muslims as well as themselves; while the inhabitants of towns avoid such discrimination, lest the Muslims should find them out.

The following list of Nusairian festivals, drawn up apparently in the order of their estimation, is given by our author, with the distinct understanding of its not including all:

1. Festival of 'al-'Ihâdir (عيد الغدير), on the 18th of Dhu-l-Hajjah.
2. " 'al-'Uqlhiyah (عيد الاقحمة) " 10th "
 A memorial of 'Ismâ'il 'Ibn Hâjir.
3. " 'al-Maharjân (عيد المهرجاني), on the 16th of First Tishrin.
4. " 'al-Barbârah (عيد البرباري) " 4th of Second Tishrin.
5. " after an interval of a week from the last.
6. " " " "
7. " the Birth-time of lord Messiah (عيد مبلاد السيد)
 (المسيح), on the 15th of First Kânûn.
8. " the Baptism (عيد الغداس), on the 6th of Second Kânûn.

9. Festival of 17th of 'Adhâr (عيد انسابع عشر من اذار).
10. " 1st Nisân (عيد أول نيسان).
11. " 4th " (عيد الرابع).
12. " 15th " (عيد الخامس عشر منه).
13. " 9th First Rabi', called the Second Ghadir (غدير ربيع).
14. " night of the 15th of Sha'bân (عيد ليلة نصف شعبان).

In connection with this list, certain other festivals are enumerated, without specification of the times when they are celebrated, namely, the Festival of John the Baptist and of John Chrysostom (عيد بوحنا المجدان وبوحنا قم الذهب), the Festival of Palms and of the Element (عيد الشعانين والعنصرة), and the Festival of Mary Magdalene (عيد لمريم المجدلانية). The following seasons of special observance are also mentioned: the first night of Ramadhân, and the seventeenth, nineteenth, twenty-first, and twenty-third nights of the same month. The whole enumeration by our author accords, for the most part, with Catafago's list, published in the *Journal Asiatique* for 1848;* though each authority names some celebrations not noticed by the other.

The subject of the third section of this tract is rather imperfectly indicated, in its title, by the words "on the Office of the Chiefs of the Nusairîs, and the Prayers used at their Festivals," (في وضع المشايخ انصميريه وصلوات اعبادهم). After remarking that there are three orders of chiefs, namely, Imâms, Pursuivants, and Dignitaries, the author proceeds to illustrate their respective duties, mutual relations, and relations to the congregation of believers, by a description of the ceremonies observed on festival occasions, into which he introduces various liturgical forms not hitherto spoken of.

When the day comes, the men assemble at the house of the master of the festival (صاحب العيد), that is, of the person at whose expense it is celebrated; and the Imâm takes a seat among them. Then there is placed before him a piece of white cloth, on which are laid mahlab-berries, camphor, candles, and myrtle or olive leaves; a vessel filled with wine of pressed grapes, or figs, is brought forward; and two Pursuivants seat themselves on either side of the Imâm. Then the master of the festival designates another Pursuivant to act as the minister of the occasion, and coming forward kisses the Imâm's hand, and the hand of each of the Pursuivants seated by his side, as well as that of the Pursuivant selected to perform the service. The latter then

* *Journ. Asiat.*, iv^e Série, xi. 149-55.

ris^es, and places his two hands upon his breast, saying: "May God grant you a good evening, my lords, and a pleasant and happy morning!—is it your pleasure that I minister for you at this blessed festival (or, blessed time), over the cup of so and so, the master of ceremonies?—God bless him!" يا الله يمسككم بأخير يا—اسيادى وبصحكم بالرضى والسعادة هل ترضون خادما نلّم في هذا العيد المبارك أو الوقت المبارك على كيس صاحب العجل فلان الله يبارك عليه to which those present reply: "Yes;" whereupon the Pursuivant, making his obeisance to the assembly by kissing the ground, takes in his hands some myrtle leaves, and distributes them, reciting, meanwhile, the following, called the Myrtle-string (سُتْرُ الرِّجَانِ):

"God hath said: 'If he is one of those promoted to honor, he shall have rest, and gentle puffs of air, and a garden of delight.* O God, let thy benediction rest upon the names of the myrtle-personations, namely: Ša'sa'h Bin Šūhān, Zaid Bin Šūhān 'al-'Abdī, the most excellent and meritorious 'Annūār Bin Yāsir, Muḥammad 'Ibn 'Abū Bakr, and Muḥammad 'Ibn 'Abū Ḥudhaifah—may divine benedictions rest upon them all!"—

قوله تعالى أما كان من المقربين فروح ورجان وجنة النعيم اللهم صلّ على أسماء أشخاص الرّجّان هم صعصعة بن صوحان وزيد بن صوحان العبدى وعمار بن ياسر صاحب العضل والمآثر ومحمد ابن أبى بكر ومحمد ابن أبى حذيفة صلوات الله عليهم أجمعين —

These words are likewise recited by all present, who rub in their hands, meanwhile, the myrtle leaves, and smell them. Afterwards, the Pursuivant takes a basin of water, puts into it some maḥlab-berries and camphor, and reads a mass,† as follows:

"The Perfume-mass."

"O ye believers, have regard to this your Demigod, in whose presence ye are assembled, and put away hatred from your hearts, and doubt and malice from your breasts, that your worship may be perfected by acquaintance with your Indicator, that your invocation may be accepted, and that our Lord, and yours, may honor your hospitality. Know ye that 'Alī 'Ibn 'Abū Ṭālib abides with you, is present among you, hearing and seeing, and that he knows whatsoever is above the seven heavens, as well as whatsoever is beneath the ground, and is acquainted with secret thoughts, the mighty one, the forgiving. Beware, beware, O

* Kur., lvi. 87, 88.

† The first three of the four masses which we here publish have already appeared in the Zeitschr. d. D. M. Gesellschaft, ii. 389-91; but one has only to compare the two texts to see that, in many passages, the one formerly published is corrupt and unreliable.

brothers, of being merry and laughing loud, in prayer-time, as do the fools; for such behavior invalidates ceremonies, brings on catastrophes, and impairs what is virtuous in conduct. But hearken to and hear the commands of the Lord Imâm; for he stands among you, as it were, in the majesty of the infinite, the supreme, the omniscient One. We, being thus minded, have mingled for you this perfume, as the heavens are blended with the seven signs of imâmship, on the peerless necklace of souls existing in substance, disencumbered of fleshly, human, bald-templed form. With those seven regale ye your chaste souls, pure from all wicked deeds. Therewith doth the Mîm endow the Sin in every age, and at all times—I affirm it on oath, on oath—so that he is 'Alî, a God, to whom sincere worship is due, beside whom all beings invoked by men are a lie (seeing that to worship the creature is an idle fancy), for he—let him be exalted, and let his state be magnified! is, in the height of his dignity, the all-informed, the omniscient, the august Supreme”—

قدّاس الطيب

يا ايها المؤمنين انظروا الى مقامكم هذا الذى انتم به مجتمعون وانزعوا الغلّ من قلوبكم والشكّ والحقد من صدوركم ليكمل لكم دينكم بمعرفة معينكم ويستجاب منكم دعاءكم ويكرمّ مثواكم مولانا ومولاكم اعلموا ان عليّا ابن ابي طالب قائم معكم وحاضر بينكم ويسمع ويرى ويعلم ما فوق السماوات السبع وما تحت الثرى وهو عليم بذات الصدور العزيز الغفور اياكم اياكم يا اخوان من الضحك والفقهية في اوقات الصلوة مع الجهال فانها بيّس الفعال وتقرب الاجال وتهبط صالح الاعمال ولكن اصغوا واسمعوا لمقال السيد الامام لانه قائم فيكم كقيام الفرد الصمد العلى العلام انا مزجنا لكم هذا الطيب على هذه النية كما مزجت السماوات في السبعة الامامية في خالص عقد النفوس الجوهرية تنزيها للصورة البشرية المريية الانزعية طيبوا بها انفسكم الطاهرة الزكية من ساير الافعال الردية لقد خصّ بها من الميم للسبين فى كلّ وقت وحين اليّا اليّا فهو عليّا له الدين اخلص انما يدعون من دونه باطل وعبادة المخلوقات هي الرأى العاقل لانه تعالى عزّ شأنه فى علو مكانه السميع العليم العظيم انتهى —

He then pours upon the Imâm's hand a spoonful of the perfumed water, and gives the basin to the Dignitary, that he may do the same upon the hand of each person present. While the Dignitary is thus going the round, he reads the following, called the Perfume-string (سطر الطيب):

"God hath said : 'The unbelievers see that the heavens and the earth were each a solid mass, and that we have ruptured them, and, by means of water, produced every living thing—will they not, then, believe?*' Glory be to him who vivifies the lifeless, in a land of freezing cold. By the power of our Lord, the almighty Supreme—omnipotent is God! omnipotent is God!"—

قوله تعالى ير الذين كفروا ان السماوات والارض كانتا رتقا ففتقناهما وجعلنا من الماء كل شئ حتى افلا يؤمنون سبحان من احيا الميت بارض النصرصر
بقدره مولانا العلى الاكبر الله اكبر الله اكبر —

All present likewise recite this formula, laving their faces the while. Then the Pursuivant takes a censer, and stands up, and reads the second mass :

"The Incense-mass."

"The mass of incense, and of exhaled odors, circling about in the revered house, in the dwelling of our God, a dwelling of joy and gladness. Some one says that our chief and lord, Muḥammad Bin Sinân 'az-Zāhirî—peace be to us from him! was accustomed to stand up for the Friday-prayer, every day and night, once or twice, taking in his hand a ruby, or, as is also said, a sapphire, or, according to another report, a chrysolite, which was consecrated to the brilliant Fâtimah, and incensing cups, with perfection of cheer, incensing the servant of light, therewith, amid festive decoration and glitter. Know ye, O believers, that the light is Muḥammad, and the night Salmân. Incense your cups, and light your lamp, and say, all of you : Praise be to God, praise be to God, whose favor unsurpassed, and whose mystery defying penetration, has been bestowed upon us—bountiful, noble, exalted, august is he! Believe and be assured, O believers, that the person of the servant of light is free to you, among yourselves, and forbidden to you in the company of others"—

قداس البخور

قداس البخور وروايح تدور في البيت المعور في محلّ الهنا والفرح والسرور
قال انه كان شيخنا وسيدنا محمد بن سنان الزاهري علينا سلامه يقوم الى
صلوة الجماعة في كل يوم وليلة مرة او مرتين ويأخذ بيده يافوتة حمراء وقيل
صفراء وقيل خضراء تنزيها لفاطمة الزهراء ويبخر الافداح وتتم الافراح
ويبخر بها عبد النور في وقت الزينة والزهور اعلمو يا مؤمنين ان النور
محمد والليل سلمان بخروا افداحكم وانبروا مصباحكم وقولوا باجمعكم الحمد
لله الحمد لله الذي جعل لنا فضله نامم وسرّه كاتم انه جواد كريم على

* Kur., xxi. 31. The common text begins with a question : أولم.

عظيم آمنوا وصدقوا يا مؤمنين أن شاخص عبد النور حلال لكم معكم
حرام عليكم مع غيركم انتهى —

In a note to this formula, our author says that what is meant here by "the servant of light" is wine; that is, wine is here presented as an image of 'Alî.

After this the Pursuivant incenses the Imâm, as well as the two seated by his side, and gives the censer to the Dignitary, that he may incense the rest of the assembly. While going his round, this official recites the following, called the Incense-string (سطر البخور):

"O God, give benediction and peace to our lord Muhammad, the elect . . . (after whom, says our author, he names the sons of Muhammad's daughter, mentioned in the notes on the Third Chapter (see p. 240) and adds:)—may the divine benediction rest upon them all"—

اللهم صل وسلم على سيدنا محمد المصطفى . . . صلوة الله عليهم
اجمعين —

The receivers of the incense likewise recite this formula. Afterwards, the Pursuivant takes a cup in his hand, and standing up reads the third mass:

"Mass of the Call to Prayer.

"Omnipotent is God! omnipotent is God! omnipotent is God! omnipotent is God! I set my face toward lord Muhammad, worthy to be praised, inquiring after his pattern-mystery, his loving self, confessing the knowledge of God, the divine revelations, the [embodied] attributes of Deity, and sanctifying myself. By Divine Being is meant the divine, [in manifested form] bald-templed, essence of 'Alî, itself, to wit, the Archetypal Deity, the sublime 'Alî; and as to the glorious Fâtir, the perfect 'al-Hasan, the beneficent Muhsin, Mystery of Obscurity, I humbly hold, O believers, to that which lord Salmân held to, when there was a summons, and a call to prayer. The crier, in his tower, called to prayer, and was heard by the people, as he called, saying: 'Omnipotent is God! omnipotent is God! I testify that there is no God but 'Alî the Prince of Bees, with the bald forehead, the adorable; and no Intermediary but lord Muhammad, the surpassing, the all-glorious, the august, the worthy to be praised; and no Communicator but lord Salmân 'al-Fârsî, the pattern; and that lord Muhammad is the Deity's allied Intermediary, his commissioned prophet, his book of revelation, his august throne, and his firm seat; and that lord Salmân Salsal Salsabil is his noble Communicator, his established way, whereby alone one comes to God, the ark of salvation, the fountain of life. To prayer! to prayer! pray, O multitude of believers, that ye may enter the Garden set before you. To gladness! to gladness! and ye shall be made glad, O believers, being delivered from bodily grossnesses, and corporeal darkness, repos-

ing amid houris and home-born servants, and beholding your glorious Lord, the Prince of Bees, the great Supreme—omnipotent is God! omnipotent is God!—your Lord, the Prince of Bees, 'Alī, greater than all the great, more august than all exalted ones, sublime beyond all reach, mighty beyond all injury, continuing beyond all extinction of being—omnipotent is God! omnipotent is God! Forever obligatory is prayer on those to whom it is given to pray; forever is its evidence to be reiterated by those who are taught it. I entreat thee, O Prince of Bees, O 'Alī 'Ibn 'Abū Ṭālib, that thou wouldst establish the same, and perpetuate it, so long as the heavens and the earth endure; and do thou make lord Muhammad to be its suspension of action, ceasing from food, and invocation of blessing; lord Salmān to be its asking for peace, and its holy collectedness; 'al-Mikdād, its turn to the right, and point of regard; 'Abu-dh-Dharr, its turn to the left, and completion; all worlds, its pathway; and believers, its indication of faith*—forever. Amen"—

قداس الاذان

الله اكبر الله اكبر الله اكبر وجهي الى السيد محمد المحمود
وطالب سره المقصود وعينه الودود مقراً بالمعرفة والتجليات والصفات ومنزها
المعنى بالذات هو عين العلوية الذاتية الانعسية هو المعنى على المتعال واما
فاطر ذو الجلال والحسن ذو الكمال ومحسن سر الخفى المفضال انى عبد يا
مومنين مقراً بما قر به السيد سلمان في وقت النداء والاذان اذن الموثق في
المانعة وبلغ القوم في آذانه وهو يقول الله اكبر الله اكبر اشهد بان ليس اله
الا على امير النحل الاصلح المعبود ولا حجاب الا السيد محمد الحمد الاجل
الاعظم المحمود ولا باب الا السيد سلمان الفارسي المقصود وان السيد محمد
حجابه المتصل ونبيه المرسل وكنابه المنزل وعرشه العظيم وكرسیه المتين وان
السيد سلمان سلسل سلسبيل بابه الكريم ونهاجه القويم الذي لا يؤتى اليه
الا منه وسقينة النجاة وعين الحيوة حى على الصلوة حى على الصلوة صلوا
يا معشر المومنين تدخلوا الجنة النى انتم بها موعودين حى على الفلاح
حى على الفلاح تغفلحون يا مومنين تخلصون من كثايف الابدان وظلمة
الاجسام وتسكنون بين الحور والولدان وتعاينون مولاكم الجليل امير
النحل العلى الكبير الله اكبر الله اكبر مولاكم امير النحل على اكبر من

* The various parts of the ceremony of prayer, as practised by the Muslims, are here alluded to under the cover of metaphors which virtually abolish it: comp. the Fourteenth Chapter and notes.

تكبر واعظم ممن تجبر صمدا لا يرام عزيزا لا يضام قيوما لا ينام الله اكبر
الله اكبر قد قامت النسلوة على اربابها وثبتت الحجة على اصحابها اسألك يا
امير النحل يا على ابن ابى طالب ان تقبمها وتديها كما دامت السماء
والارض واجعل السيد محمد ختامها وصيامها وصلوتها والسيد سلمان
سلامها وزكاتها والمقداد يمينها ومعينها وابو الذر شمالها وكمالها والعالمين
سبيلها والمؤمنين دليلها الى الابد امين انتهى —

He then presents the cup to the Imâm, and, filling another, gives it to the person seated on the Imâm's right, and hands a third to the one seated on his left; each of whom recites what follows:

"I testify that my Lord, and thine, is the Prince of Bees, 'Alî Ibn 'Abû Tâlib, who is unconditioned, imperishable, unchangeable; and I testify that his Intermediary is lord Muḥammad, and his Communicator lord Salmân; and the Communicator proceeds not from between the Archetypal Deity and the Expressed Deity"—

اشهد ان مولاى ومولاك امير النحل على ابن ابى طالب الذى لا حال
ولا زال ولا ينتقل من حال الى حال واشهد بان حجابك السيد محمد وبابه
السيد سلمان ولا منفصل بين المعنى والاسم الباب —

after which the presenter of the cup says to each: "Take, O my brother, this cup in thy right hand, and ask help of thy Lord, 'Alî Ibn 'Abû Tâlib, thy ruler and helper"—خذ يا اخى هذه—

و; اكلأس بيمينك واستعين بمولاك على ابن ابى طالب يدبرك ويعينك
to which each communicant replies: "Give, O my brother, that which is in thy right hand, and ask help of thy Lord and Creator, thy ruler and helper in matters of thy religion—may God make it to flourish with his affluence, by the suretyship of Muḥammad and his race!"—هات يا اخى ما فى يمينك واستعين بربك—

وخالقك فهو يدبرك ويعينك على امور دينك اتمر الله من هذا من ماله

Afterwards, the Pursuivant rises, and placing his hands upon his breast says: "May God grant you a good evening, O brothers, and a pleasant morning, O people of the faith! Forgive us any errors, or negligences; for man is so called only because he lapses into error, and absolute perfection pertains only to our Lord, the glorious 'Alî, who is omniscient"—الله يمسىكم بالخير يا اخوان ويصحبكم بالرضى يا اهل الايمان ساجدونا من الغلط والسهيان لان الانسان ما سمى انسانا الا لاجل انه يخطئ وما تم

الكمال الا لمولانا على ذى الجلال وهو بكل شئ عليم and then kisses the ground, and sits down.

Then the Imâm, facing the assembly, says: "May God grant you a good evening, O brothers, and a pleasant morning, O people of the faith! Is it your pleasure that I should minister for you, on this blessed day, over the cup of the master of ceremonies?—God bless him!"—*اللہ یمسبکم بالخبیر یا اخوان ویصحبکم بالرضی*—*یا اهل الايمان هل نرضونى خادما لکم فى هذا النهار المبارک على کيس* صاحب العجل بارک الله عليه and kisses the ground, which the assembly also do, striking two octaves with the words: "We accept thee as our chief and lord"—*قبلناک شيخنا وسيدنا*. The Imâm then says: "It is a tradition, on the authority of our lord Ja'far 'aṣ-Ṣâdiq, the reticent and declarer, the render and binder,* that he said: 'At prayer-time, it is forbidden either to take, to give, to sell, to buy, to report the news, to whisper, to be noisy, to be restless, or to tell stories, over the myrtle; but let there be silence, listening attention, and saying of "Amen." Know ye, O brothers, that if any one wears upon his head a black turban, or carries on his finger a kishtbân, or at his waist a two-edged knife, his prayer is hindered; and the greatest of sins is to fail in duty over the myrtle; for what is binding upon a messenger, if not manifest vigilance?"—*قد روى الخیر عن مولانا* جعفر الصادق الصامت الناطق العائق الرائق انه قال فى اوقات الصلوة لا يجوز اخذ ولا عطاء ولا بيع ولا شراء ولا حديث ولا شوشرة ولا هرج ولا مرج ولا حديث فوق الرجاء الا الصمت والاستماع وكلمة آمين اعلموا يا اخوان من كانت على رأسه عمامة سوداء او باصبعه كشتبان او فى وسطه سكين ذات حدين فصلوته غير جائزة واكبر الذنوب الخطاء فوق الرجاء وما على الرسول الا البلاغ المبين. Then he kisses the ground, saying: "This homage to God and to you, O brothers!"—*هذه الضاعة*—*للہ وللم* يا اخوان after which all who are present prostrate themselves, kiss the ground, raise their hands to their heads, and say: "To God—let him be exalted! be thy homage paid, O our chief and lord!"—*ناعتنک لله تعالى يا شيخنا وسيدنا*.

Afterwards, the Imâm reads the Formula of Disburdening (*التبتري*), as follows:

"May God, the august Supreme, forgive all grievous sins, and all mistakes, mishaps, and slips, in our observance of prayer! Let us pray, if God will—let him be exalted! (so and so, naming, says our author, some time of prayer, according to the enumeration given in the notes on the

* See note † on p. 245.

Third Chapter). I entreat thee, O Prince of Bees, O 'Alī Ibn 'Abū Ṭālib, that thou wouldst make it for us an hour of favorable response, an hour of forgiveness, and an hour of complacence; and that thou wouldst most graciously accept it. By the reality of the lord Messenger, of the immaculate Fāṭimah, of Muḥsin, Mystery of Obscurity, and of the tranquil, unveiled, night, do thou accept it from us, as thou hast accepted it from thy blameless saints, thy commissioned prophets, and all thine obedient servants, of primitive and later times. It is a tradition, on the authority of 'Abū Shu'aib Muḥammad Bin Nuṣair 'al-'Abdī 'al-Bakrī 'an-Numairī, that he said: 'Whosoever desires salvation from the glow of infernal fires, let him say: "O God, curse thou a gang who lay foundations of iniquity and transgression, the nine companies of corrupters, who work corruption, and behave themselves not aright in religion, whose way leads to Hell-fire, whither tend their erring steps: to wit, that company, first of all, composed of 'Abū Bakr, the cursed, 'Umar 'Ibn 'al-Khaṭṭāb, the iniquitous Adversary, and 'Uthmān Bin 'Affān, the calumniating Satan; together with the companies of Ṭalhah, Sa'd, Sa'id, Khālīd 'Ibn 'al-Wālid, handler of the cutting blade, Mu'āwiyah and his son Yazīd, 'al-Ḥajjāj Bin Yūsuf 'ath-Thakāfi, the inexorable, 'Abd-'al-Mālik Bin Marwān, the stupid, and Hārūn 'ar-Rashīd—may the curse abide upon them, even to the threatened day! that day when Hell-fire will be inquired of: 'Art thou satisfied?' to which it will answer: 'Have I been supplied?' and thou, O 'Alī 'Ibn 'Abū Ṭālib, wilt, then, do what thou wilt, and pass sentence as thou pleasest. I entreat thee, also, that thou wouldst let thy wrath and chastisement descend upon 'Ishāk 'al-'Aḥmar, the broken-backed, and 'Ismā'il Bin Khallād, the fool; and do thou curse Shaikh 'Aḥmad 'al-Badawī, Shaikh 'Aḥmad 'ar-Rifā'i, Shaikh 'Ibrāhīm 'adh-Dhusūki, Shaikh Muḥammad 'al-Maghrabi, 'ash-Shibl 'al-Marjān, and Shaikh 'Abd-'al-Kādir 'al-Ghilāni, together with every Jew and Christian; and do thou curse the Hanifite, Shāfiite, Mālikite, and Hanbalite sects; and let thy wrath and chastisement, O Prince of Bees, O 'Alī 'Ibn 'Abū Ṭālib, descend upon the wretch 'Ibn Karkar, 'Ishāk 'al-'Aḥmar, the camel-chafer Kaidār, and Hubaiyib 'al-'Attār; and cause them to enter Hell-fire—how shall one be informed what Hell-fire is, which spares not, nor reserves, a changer of men's color! Cursed be all the nineteen! Also, curse thou those who play with apes, and catch hold of black serpents, together with all Christians and Jews, and every one who believes that 'Alī 'Ibn 'Abū Ṭālib ate, or drank, or was born, or had sexual intercourse—may God curse them! may God curse them! Moreover, lay thou the curse upon John Mārūn the Patriarch,* the execrable, and upon all those who feed on thy bounties, while they worship not thee; and do thou rid us of them utterly, as flesh is cleared from a bone, by the suretyship of 'Alī, Muḥammad, and Salmān, and by the favor of 'Ain-Mim-Sin'—

استغفر الله العلي العظيم من كل ذنب عظيم من جميع الخطايا والبلايا

* The first patriarch of the Maronites, who held office about A.D. 700: s. Assemani *Bibl. Orient.*, i. 496.

والزّل على نية الصلوة نصلى ان شاء الله تعالى . . . أسألك يا امير
 النحل يا على ابن ابي طالب ان تجعلها منّا ساعة اجابة وساعة غفران
 وساعة رضوان وتقبلها باحسن قبول بحق السيد الرسول وفاطمة البتول
 ومحسن سرّ الخفى والبليل الساجى السدول ان تقبلها منّا كما قبلتها من
 اوليائك الصالحين وانبيائك المرسلين واهل طاعتك اجمعين من الاولين
 والاخرين روى الثّبر عن ابو شعيب محمد بن نصير العبدى البكرى
 النميرى انه قال من اراد النجاة من حرّ النيران فليقول اللهمّ اعن فيئة
 أسست الظلم والطغيان الذين همّ التنسعة رهط المفسدين الذين افسدوا
 وما اصلحوا بالدين الذين هم الى جهنم سايرين واليها صالّين اولهم
 ابو بكر اللعين وعمر ابن الخطاب الضد الاثيم وعثمان بن عفان الشيطان
 الرجيم وطلحة وسعد وسعيد وخالد ابن الوليد صاحب العهود الجديد
 ومعاوية وابنه يزيد والحجاج بن يوسف اثقفى النكيد وعبد الملك بن
 مروان البليد وهارون الرشيد خاد عليهم اللعنة تخليدا ليوم الوعيد يوم
 يقال لجهنم هل امتلأت فتقول هل من مزيد ثم انك يا على ابن ابي طالب
 تفعل ما تشاء وتحكم بما تريد وأسألك ان تنزل سخطك وعذابك على
 اسحق الاحمر الماخزول واسماعيل بن خلّاد الجهول والعن الشيخ احمد
 البدوى والشيخ احمد الرفاعى والشيخ ابراهيم الذسوقى والشيخ محمد
 المغربى والشبل المرجان والشيخ عبد القادر الكيلانى وكلّ يهودى ونصرانى
 والعن المذهب الخنقى والشافعى والمالكى والحنبلّى وانزل يا امير النحل
 يا على ابن ابي طالب سخطك وعذابك على الجلندى ابن كركر واسحق
 الاحمر واعقر الناقة قيدار وحبيب العطار فادخلهم فى سقر وما ادراك ما
 سقر لا تبقى ولا تزر لراحة للبشر عليهم اللعنة تسعة عشر والعن لعابى
 القرد ومساكى الحيات السود وجميع النصارى واليهود وكلّ من يعتقد فى
 على ابن ابي طالب آكلا او شاربا او مولودا او ناكحا لعنهم الله لعنهم
 الله واجعل اللعنة على يوحنا مارون البطريرك الملعون وعل كلّ من أكل
 خبرك وعبد غيرك وابرينا منهم براءة تامة تبرية اللحم عن العظم بحرمة
 على ومحمد وسلمان وبفضل ع م س —

Then he wipes his hand upon his breast, saying to those present: "We disburden ourselves of these vile Satans, the heretics,

in dependence on the favor of 'Ain-Mîm-Sîn" — *نَتَبَرَّأُ مِنْ هَؤُلَاءِ* — *الشیاطین الخبیثاء المارقین علی فضل ع م س*, which the people assembled repeat, kissing one another's hands to the right and left; after which the Imâm reads the Chapter of the Opening (*الفاتحة*), and the Chapter of the Two Deficiencies (*المعورتین*), together with all that follows, up to the Chapter of the Sun (*سورة الشمس*), and the Chapter of Broad Sunshine (*وضحاه*)* and also

the throne-verse (*آیة الكرسي*),† and other verses of the Kūrân, at his pleasure. When he has done reading, he says to the assembly: "Know ye, O brothers, that there are many such proof-passages, and verses like these, which inform with knowledge of the great Supreme. I entreat thee, O Prince of Bees, O 'Alî, thou august one, by the security of these evidencing verses, and these chapters, and of miracles and powers, and by the suretyship of lord Muḥammad, who from the light of thy being was parted, that thou wouldst compensate and bless the confessors of this bounty, this benefit, this primitive faith—may your place of abode be inviolate, your branch flourishing, your enemies be destroyed! may your Lord, the all-controlling Supreme, the animator of forms, bless you! O God, let benediction and peace be to our lord 'al-Khaḍhir 'al-'Akhdhar, to the prophet of God Alexander, to Mâlik Ja'far 'at-Taiyâr, to Sultân Ḥabîb 'an-Naj-jâr, and to my lord Mîtham 'ath-Thumâr. Moreover, may the spirit of my lord Shaikh Ḥasan 'al-'Asmar be sanctified, and hail with wishes of mercy! also, that of Shaikh 'Ibrâhîm Bin Kâshmir, that of Shaikh Khalîl-i-Matwar, and that of Shaikh 'Alî-fi-s-Şanaubar! and may God make it an evening and a night fraught with blessing to us, and to you, O brothers, all ye who are present! By the suretyship of the all-controlling Sovereign, O Prince of Bees, O 'Alî, thou august one!" — *اعلموا یا*

*اخوان ان مثل هولاء شواهد وآیات كثيرة تدل علی معرفة العلی الکبیر
أسألك یا امیر النحل یا علی با عظیم بحرمة هولاء الشواهد والسور
والعاجز والقدیر وبحرمة السید محمد الذی هو من نور ذاتک انقطر بان
تخلف وتبارک لاصحاب هذا اخییر وهذا الاحسان وهذا الاثر وجعل محکم
معر وفرعکم اخضر وعدوکم مدمر یدبارک علیکم مولاکم العلی المقتدر*

* Kur. i., and lxxxiii-xciii—the variation in the title of ch lxxxiii from our copies, which have *سورة المطففين*, is only verbal.

† Perhaps Kur., ii. 256.

النافع في الصور اللهم صلى وسلم سيدنا الخضر الاخضر وذى الله الاسكندر
والملك جعفر الطيار والسلطان حبيب التجار وسيدى ميثم التمار ويقدر
ويرحم روح سيدى الشيخ حسن الاسمر والشيخ ابراهيم بن قاسم والشيخ
خليل متور والشيخ على فى انصوير وجعلها مساه ولياة مباركة علينا
وعليكم يا اخوان يا من حضر بحرمة العزى المغندر يا امير النحل يا على
يا عظيم.

After this prayer, the Imâm begins with certain other forms, glorifying and adoring 'Alî, and recites many masses, of which our author gives only the last:

"Mass of Betokening."

"Praise be to God, to 'Alî the consummate, to 'Alî the light of men, to 'Alî the lord of glory, to 'Alî the seed-burster, to 'Alî the creator of the breath of life, to 'Alî the fountain of wisdom, to 'Alî the key of mercy, to 'Alî the lamp in darkness, to 'Alî the potentate of potentates, to 'Alî the extirpator of imperial princes, to 'Alî the lord of the stately tabernacles, to 'Alî the Imâm of the apsis, to 'Alî the remover of the gate, to 'Alî the dissipator of sorrows, to 'Alî the worker of miracles, to 'Alî the opener of the ground, to 'Alî whose love is unfailing, to 'Alî the delight of the grey-haired, to 'Alî the knower of that which is inexplicable, to 'Alî the king of this lower world, to 'Alî lord of the last and first of time, to 'Alî the render of rocks, to 'Alî the light of the dawn, to 'Alî the river of wine, to 'Alî the father of 'al-Hasan, to 'Alî the river of milk, to 'Alî the cause of causes, to 'Alî the stiller of the movements of revolving cycles, to 'Alî the river of honey, to 'Alî the river of water, to 'Alî the elevator of the heavens, to 'Alî the originator of time, to 'Alî the exalted in state, to 'Alî abounding in wonders, to 'Alî lord of the climes of the rising and the setting sun, to 'Alî who is Haidarah with the bald forehead, to 'Alî the bald-templed, mysterious one, to 'Alî the lord of the fish, to 'Alî the veiled mystery, to 'Alî the olive tree, to 'Alî the knower of secret thoughts, to 'Alî the full sea, to 'Alî the lord of destiny, to 'Alî the render of rocks, to 'Alî the dignity of the cow, to 'Alî the horseman of horsemen, to 'Alî the vivifier of crumbled bones, to 'Alî the revealer of the book, to 'Alî the disperser of clouds, to 'Alî the opposer of the sun, to 'Alî arrester general of souls, to 'Alî the omnipotent sovereign, to 'Alî the overpowering disposer, to 'Alî the smiter with Dhu-l-Fakâr, to 'Alî who was Haidarah persistent in onset, to 'Alî the autocrat of the earth, to 'Alî the rightful claimant of all free-will service and enjoined obedience, to 'Alî alone and sole; to 'Alî who was Abel, to 'Alî who was Seth, to 'Alî who was Joseph, to 'Alî who was Joshua, to 'Alî who was Asaph, to 'Alî who was Simon Peter. To this Archetypal Deity we give glory, reverence, landings, magnifyings, extollings, and ascriptions of greatness—to that being whom primitive believers betokened, and the eternity of whose archetypal divinity has been shown by prophets and messengers; and we betoken that which was betokened by our chief and lord 'al-Husain Bin Hamdân 'al-Khusaibî, and which was betokened by his progenitor

Muhammad Bin Nuṣair 'al-'Abdī 'al Bakrī 'an-Nuṣairī, and which was betokened by Salīmān the Communicator—that being whose archetypal divinity was shown by lord Muḥammad the Intermediary, in the seven tabernacles, from Abel the well-pleasing, to Ḥaidarāh 'Abū Turāb. Know ye, O my brothers, that your God is the eternal archetype of archetypes, the alone, the sole, the sublime, through fellowship with whom we shall be promoted to gardens of pleasure, and partnership with the lights of heaven. Know ye that this is our prayer, our pilgrimage, and our alms; and the betokening and the adoration of our inmost souls, in simple confidence, of 'Alī 'Ibn 'Abū Ṭālib, the mysterious, bald-templed one, the uncompounded, in whom there is no distinction of parts, the indivisible, whom no number comprises, who is neither conditioned nor finite, to whom periods and ages bring no change, the so denominated Ḥaidarāh 'Abū Turāb, to whom, to the magnificence of the glory of whose awfulness, and the greatness of the splendor of the lightning of whose divinity—to whom all necks bow, and all obstacles and difficulties give way"—

• قدّاس الإشارة

الحمد لله على النعماء على نور الأنام على ربّ العزة على فالف أحبّة على بارئ
النسمة على ينبوع الحكمة على مفتاح الرّمة على سراج الظلمة على جبّار
الجبابة على مبيد الأكاسرة على صاحب القباب الفاخرة على إمام الحراب
على قانع الباب على مفرّج الارباب على صاحب المعجزات على داخى الارض
على حبّه فرض على نرفه الشبيب على عالم الغيب على مالك الدنيا
على صاحب الآخرة والاولى على شقّ الصخر على نور الفجر على نهر
الحر على ابو الحسن على نهر اللبن على معتل العلل على مغنى حركات
الدول على نهر العسل على نهر الماء على رافع السماء على بدبع الزمان
على رفيع الشأن على نيزر العجايب على ربّ المشارق والمغرب على حيدرة
الاصبع على البطّين الانزع على صاحب النون على السرّ المكنون على
شجرة الزيتون على عالم ما فى الصدور على البحر المسجور على صاحب
القدرة على شقّ الصخرة على سورة البقرة على فارس الفوارس على محبى
العظام الدوارس على منزل الكتاب على مفرق السحاب على ردّ الشمس
على قابض على كل نفس على العزيز الجبار على قادر فهاى على ضارب بذو
الفقر على حيدرة التّرار على جبّار الارض على صاحب النوافل والفرض
على احد فرد على هابيل على شييت على يوسف على يوشع على اساف

على شمعون الصفى والى هذا المعنى نستبح ونقدس ونهلل ونكبر ونعجب
 ونعظم الى ما اشارت اليه الاولين ودلت على قدم معنويته الانبياء
 والمرسلين ونشير الى ما اشار اليه شيخنا وسيدنا الحسين بن حمدان
 الخصيبى ونشير الى ما اشار اليه جده محمد بن نصير العبدى البكرى
 النميرى ونشير الى ما اشار اليه سلمان الباب ودل على معنويته السيد
 محمد الحجاب فى السبعة الافباب من هابيل الرضى الى حيدرة ابوتراب
 اعلووا يا اخوانى ان الهكم معنا المعانى القديم الاحد الفرد الصمد انا
 بولايته نرفق الى جنان الرضى وزبادة الانوار اعلووا ان هذه صلاتنا وحجنا
 وزكاتنا واشارتنا وعبادتنا فى سر سرنا وخالص يقيننا الى على ابن ابي
 طالب الانزع البطين الذى لا ينجزى ولا يتعص ولا يئثنى فى قسم ولا
 يدخل فى عدد ولا يحول ولا يزول ولا تغيرة الازمنة والدهور المكثى بحيدرة
 ابي تراب الذى له ولعظم جلال هيئته وكبرياء سنى بريق لاهوته تخضعت
 له الرقاب وذلت له الامور الشداد والصعاب —

All then raise their hands to their breasts, and recite the Chapter of Betokening (see p. 252), each party performing the action of raising hands in its own way, as explained in the notes on that chapter. When this recitation is over, the Imâm takes in his hand a cup of wine, and reads a tradition authorized by 'al-Husain Bin Hamdân 'al-Khusaibî, in which 'Alî is set forth as the one true God; and afterwards directs the assembly to bow the head, which they do by reciting the Sixth Chapter (see p. 248); and after that he takes the cup which is in the hand of him who sits on his right, and mingles its wine with his own, saying, as he mingles: "Seest thou yonder? seest thou? O delightsomeness! O great magnificence! they are arrayed in green silk gauze and brocade, and adorned with armlets of silver; and their Lord gives them pure wine to drink. Verily, this is your portion; your zeal will surely be recompensed"—

أرأيت ثم أرأيت نعيما وملكا كبيرا عليهم ثياب سندس خضر واستبرق
 وحلوا اساور من فضة وسقاهم رثهم شرابا نهورا ان هذا كان نلم جزاء وكان
 سعيكم مشكورا. Then he reads the following melody by 'al-Hu-
 sain Bin Hamdân 'al-Khusaibî:

"Privileges with which your brother endows you, who is servant to
 a servant of Twelve Full Moons, your disciple of Junbulân, scion of
 Khusaib, drawing them from the abundance of the overflowing sea—

from the fountains of 'at-Tasnim, which yield pure wine, wine of Salsal, the choicest wine, with mixed aroma"—

حكم سافها اليكم اخيكم
عبد عبد لثاني عشر بدور
جنلاتيكم سليل خصب
يستقيها من فيض بحر الرخور
من عيون التسنيم يسقى رحيقا
سلسليا محتما بعبير —

Next he recites the Ninth Chapter (see p. 254), the assembly repeating after him, and then drinks a little from one of the two cups, and presents it to him who sits on his right, and, taking the third cup from him who sits on his left, drinks a little of that, and gives it back to him, and presents the cup which he still retains to the ministering Pursuivant; and so the cups pass around among them, from one to another; and, as they are offered, each offerer kisses the hand of the receiver, saying to him: "Be thou extolled!—drink, O my brother and lord, in the faith of the mystery of 'Ain-Mim-Sîn"—*تفضل اشرب يا*—*أخي وسيدى سترع م س*; whereupon he takes the cup, and drinks, saying to the offerer: "May God give thee to drink, O my brother and lord"—*سفاك الله يا أخي وسيدى*—to which the latter replies: "May God cheer thee through thy fellowship of the cup, and thy draught, and cause thee to attain to thy goal, and that which thou seekest after!"—*هناك الله في شرايك ومشروبك*. When the offering of the cup is over, the assembly pronounce an "Amen;" and thereupon the Imâm reads some verses from the *Kurân*, as follows: "T·S·M—those are marks of the Plain Book. Perchance thou wearest thyself out with grief, because they are not believers: if we please, we will reveal to them a sign from heaven to which their necks will bow,"* adding: "To God, O believers, bend!"—*والله الركعة*—*يا مؤمنين*. When this direction has been obeyed by the recitation of the Sixth Chapter, as before, he reads the Right-hand Invocation (*دعاء اليمين*), as follows:

"I entreat thee, O Prince of Bees, O 'Alî, thou august one, by the reality of this prayer, and of all bowing of the head, and visitations, and of the limits of space, and of thunderings and lightnings; by Noah and Hûd; by the reality of the Law of Moses, the Gospel of Jesus, the *Kurân* of Muḥammad, and the Psalter of David; by the reality of thy form, thy man-like form of existence, whether at day-break, or in the twilight-dawn, or in the hours of advancing day; by the reality of thine Incomparable, 'al-Mikdâd 'Ibn 'al-'Aswad 'al-Kindî, through whom thou didst parcel off the world of purity, parcels by parcels; by the light emitted from the midst of the day-beam (that is, says our author,

* *Kur.*, xxvi. 1-3.

the reddening about the sun, at its rising and setting)—I entreat thee that thou wouldst compensate and bless the confessors of this bounty, this benefit, this sumptuous charity—may the good thereof be made effective to us and to you, evil be put away far from us and you, and the malice of rabble-crowds and Adversaries be brought to nought, not injuring us or you! and may they who are buried beneath the ground wish mercy to us and you! O God, let benediction and peace be to my lord 'al-Khaḍhīr 'al-'Akhḍhar, to Mālik Ja'far 'at Taiyār, to Sultān Ḥabīb 'an-Najjār, who hewed blockhead after blockhead,* and to Sultān 'Ibrāhīm, together with his son Maḥmūd. Moreover, may the spirit of my lord and teacher Shaikh Ḥasan, the straight-forward, be sanctified, and hail with wishes of mercy! also, that of Shaikh Ḥasan 'al-'Ajrad, that of Shaikh 'Alī 'aṣ-Ṣuwairī, that of Shaikh 'Alī Bin Mamdūd, that of Shaikh Sa'd, as well as that of his brother Shaikh Ma'sūd, and that of Shaikh Dā'ud, in the city of the celestial sphere! and may the spirits of all believers within the four corners of this lower world, and the limits of space, be sanctified, and hail with wishes of mercy! Peace be to us and to you from 'Alī, the bald-templed, the adorable! Render salutations, and ye shall be preserved from all affliction and straits!—

أَسْأَلُكَ يَا أَمِيرَ النُّحُلِ يَا عَلِيَّ يَا عَظِيمَ بِحَقِّ هَذِهِ الصَّلَاةِ وَالسَّجْدِ
وَالزُّبَارَاتِ وَالْحُدُودِ وَالْبُرُوقِ وَالرُّعُودِ وَبَنُوْحَ وَهُودَ وَبِحَقِّ تَوْرَاةِ مُوسَى وَاتِّجِيلِ
عِيسَى وَقُرْآنِ مُحَمَّدٍ وَزُبُورِ دَاوُدَ وَبِحَقِّ صُورَتِكَ صُورَةَ الْوُجُودِ الْمُرْتَبَةِ فِي
الضُّبَاءِ وَالطَّلِّ وَالْمَمْدُودِ وَبِحَقِّ يَتِيمِكَ الْمُفْدَادِ ابْنِ الْأَسْوَدِ الْكَنْدِيِّ الَّذِي
فَدَتِ مِنْهُ عَالَمُ الصَّفَى قَدُودَ بَعْدَ قَدُودِ وَبَنُورَكَ الْمُشْتَقَّ مِنْ بَاطِنِ الْعُمُودِ
بِأَنَّ تَخْلُفَ وَتَبَارَكَ لِأَصْحَابِ هَذَا الْخَيْرِ وَهَذَا الْإِحْسَانِ وَهَذَا الْجُودِ وَبِجَعْلِ
خَيْرِهِ عَلَيْنَا وَعَلَيْكُمْ مَوْرُودًا وَالشَّرَّ عَنَّا وَعَنْكُمْ مَبْعَدًا مَطْرُودًا وَبِإِهْلَاكِ عَنَّا
وَعَنْكُمْ شَرَّ الْأَوْبَاشِ وَالضُّدُودِ وَبِرَحْمِ لَنَا وَلَهُمْ مَنْ هُوَ تَحْتَ التُّرَابِ مَلْحُودِ
اللَّهُمَّ صَلِّ وَسَلِّمْ عَلَى سَيِّدِي الْخَضِرِ الْخَضِرِ وَالْمَلِكِ جَعْفَرِ الطَّيَّارِ وَالسُّلْطَانِ
حَبِيبِ النَّجَّارِ الَّذِي تَجَرَّ الْعُودَ بِالْعُودِ وَالسُّلْطَانِ إِبْرَاهِيمَ وَوَلَدَهُ مُحَمَّدَ
وَبَنِيَّاسَ وَبِرَحْمِ رُوحِ سَيِّدِي وَاسْتِزَادِي الشَّيْخِ حَسَنِ مَاسِكِ وَطَأْ الْعُوجَةِ
وَالشَّيْخِ حَسَنِ الْأَجْرَدِ وَالشَّيْخِ عَلِيَّ الصُّوَيْرِيِّ وَالشَّيْخِ عَلِيَّ بْنِ مَمْدُودِ
وَالشَّيْخِ سَعْدِ وَأَخِيهِ الشَّيْخِ مَسْعُودِ وَبِالسَّفَرِ قِيَةِ الشَّيْخِ دَاوُدَ وَبِإِقْدَاسِ
وَبِرَحْمِ أَرْوَاحِ جَمِيعِ الْمُؤْمِنِينَ فِي أَرْبَعِ أَرْكَانِ الدُّنْيَا وَالْحُدُودِ عَلَيْنَا وَعَلَيْكُمْ
السَّلَامُ مِنْ عَلِيٍّ الْإِنْرَعِ الْمُعْبُودِ سَلَمُوا تَسَلَمُوا مِنْ جَمِيعِ الْبَلَاءِ وَالنُّكَودِ —

* A play of words upon the name 'an-Najjār.

When the Chapter of Salutation (see p. 250) is finished, the Imâm reads the Left-hand Invocation (دعاء الشمال), as follows:

"I begin, and intercede with thee, O Prince of Bees, O 'All, thou august one, O ancient of days, lord of day and night, and of time, by the reality of the fourteen saluted orders, of which seven are counted for the great world, and other seven for the little world; by the reality of the glorifying, the magnifying, the extolling, the hallowing, and the calling to mind, with cries of 'Glory to him!' 'O glorified one!' 'O glorious one,' amid those orders; by Alexander and 'Ardešhîr; by the well and bucket; by Zulaikhah; by the corn-measure and the ass;* by the Companions of the people of 'al-Kahf, and their dog Kîtmîr; by the cave, the high edifice, and the shrouded youth on his pallet;† by the reality of those who went forth on a foray, and assaulted and battled with the Devil in the pit-hollow; by four churches of our Lord, the great Supreme, namely, the church of Dâr 'al-Khaizurân, the church of 'Umm Salmah, the church of Ridhwân, under the tree, and the church of Honor to the Day of the Festival of 'al-Ghâdir—that thou wouldst compensate and bless the confessors of this sumptuous charity, benefit, and bounty. May our condition, and yours, be most graciously ordered; may whatsoever ye take in hand be favored, and succeed; and may wheat, barley, millet, sesamum, cotton, and silk, be secured to you! Moreover, may the spirit of my lord Muḥammad 'al-Kabîr be sanctified, and hail with wishes of mercy! also, that of Shaikh Haidar 'al-Kabîr, that of Shaikh 'Ibrâhîm Bâdishâh-'amîr,‡ and that of Shaikh Yûsuf 'al-Kasîr! and may the spirits of all believers, in four quarters, be sanctified!"—

ابتدأت وتوسلت إليك يا أمير النحل يا على با عظيم يا قديم الأيام
يا صاحب العصر والزمان بحق أربعة عشر مرتبة من مراتب السلام منها
سبعة عدت للعالم الكبير وسبعة أخرى عدت للعالم الصغير بحق ما بينهما
من النسب والتكبير والعظيم والتعديس والتذكير بشبر ومشبر واشبير
بالاسكندر وأردشير بالجب والدلو وزليخة والصاع والعبير بأحاب أهل الكهف
وكلبهم قطمير بالغارة والعنطرة والشبّ المستجى على السرير وحق من
غازى وحارب وقتل الجان فى فرار البير باربع بيعات لمولانا العلى الكبير
بيعة دار الحيزران وبيعة أم سلمة وبيعة رضوان تحت الشجرة وبيعة خم
يوم عيد الغدير بأن تخلف وتبارك أحاب هذا الجود والاحسان والخير

* Alluding, in these last three appeals, to the story of Joseph, as told in the Kurân, or current among Muslims: see Kur., xii. 10, 19, and 72, and Weil's Bibl. Leg. d. Muselm., 100, ff.

† Allusions to the story in Kur., xviii. 8, ff.

‡ The original text has بضاش دأمرى, which seems evidently a corruption.

ويدير حالنا وحالكهم باحسن التدبير ومهما امسكنموه بأيديكم يقبل
 ويصير ويتقبل عليكم الحنطة والشعير والذرة والسمسم والقطن والحرير
 وبقدس ويرحم روح سيدى الشيخ محمد الكبير والشيخ حيدر الكبير
 والشيخ ابراهيم بادشاه امير والشيخ يوسف القصير وبقدس ارواح جميع
 المؤمنين في اربع ااطير انتهى —

He next reads the Incense-string (see p. 269), and then concludes his prayer with three melodies by 'al-Husain Bin Hamdân 'al-Khusaibî, the assembly repeating them after him, as follows:

"First Melody.

"O manifest one, not absent from us, thou hidden one, who ceasest not to be alone, whose creative qualities suffice for me, whose Salsal-like Communicator claims our praise, respond to thy suppliants, and pardon us, and be merciful to all the past, from beginning to end. Justly do we render all praise to God, and I end my prayer with the 'Ain alone"—

الترنيمه الاولى

يا ظاهرا لم تغب عنا	وباطنا لم تنزل فردا
صفاتك الخالقات حسبي	وبابك السلسلى حمدا
اجب لداعيك واعف عنا	وارحم ما مضى قبلا وبعدا
نحمد الله بالحق حمدا	واختتم صلاتى بالعين فردا —

"Second Melody.

"From thee proceeded the revealer of the divine qualities, and all good comes from thee. O thou One, of whom neither qualities nor essence can be comprehended, thy face is my Kiblah, towards which, from every quarter, I direct my prayer, O thou all of all, and who art my all, O 'Alî! and I end my prayer in thee"—

الترنيمه الثانية

منك بدى ظاهر الصفات	وكل خير منك ياتى
يا احدا لم يحط منه	لا بصفات ولا بذات
وجهك لى قبله اصلى	اليه من ساير الجهات
يا كل كلى وانت كللى	با عليا وفيك اختتم صلاتى —

"Third Melody.

"Little matters it what fortune befalls me, I am safe. O Ja'far, God of all creatures, thou art my Lord, my Creator, my King; thou art the possessor of majesty, and the gracious friend; thou, above the heavens,

art exalted on the throne; thou on the earth art present by the Word; 'al-Husain and Moses and 'Alî were Expressions of thee; and thou art the reviver of bones"—

الترنيمه الثالثه

كل ما نابنى من الدهر خطب
صحت يا جعفر اله الانام
انت ربى وخالقى ومليكى
وانت ذو الكبرياء ولّى النعام
وانت فوق السماء على العرش تعلو
وانت فى الارض حاضر على الكلام
وانت اسماءك الحسين وموسى
وعلى وانت محبى العظام —

After this he reads the following intercession (التوسله):

"I entreat thee, O Prince of Bees, thou exalted, thou august one, by the security of this conclusion of the Dîwân, by Adam, Enos, and Kainân, by the security of the festival of 'adh-Dhuḥâ, and of 'al-Maharjân, by the festival of Thursday the 15th of the month Nisân, by the night of the 15th of Sha'bân, by the five nights of the month Ramadhân—by that which is the reality of all with thee—O 'Alî, thou eternal, thou whom nothing engrosses, thou father of the two fair ones, thou sympathizer, thou benignant, thou recompenser, thou sovereign ruler, by the reality of thine Intermediary, lord Muḥammad, and of thy Communicator, lord Salmân, by thy lodging under the mantle of the sage and the regal purple—that thou wouldst compensate and bless the confessors of this bounty, sumptuous charity, and benefit, and give them confidence for solicitude. May he make it an evening and night fraught with blessing, and a blessed day, to you, O brothers, defend you against every enemy and maligner, and preserve to you your young men, by the suretyship of the House of Wisdom, and of the Eternal! O Prince of Bees, thou exalted, thou august one!"—

أسألك يا امير النحل يا عليا يا عظيم بحرمه هذه خاتمة الديوان وبآدم
وانوش وقينان وبحرمه عيد الضحى والمهرجان وبعيد الخميس النصف
من شهر نيسان وبليلة النصف من شعبان وخمس ليال من شهر رمضان
بحقهم عندك يا على يا قديم الزمان يا من لا يشغلك شأن عن شأن يا
ابا الحسينين يا حنان يا منان يا ديان يا سلطان بحق حجابك السيد
محمد وبابك السيد سلمان وباحتك الطيلسان والارجوان ان تخلف

وتبارك لاصحاب هذا الخير والجلود والاحسان وتبدل همهم بامان وأجعلها
 مساء وليلة مباركة ونهارا مباركا عليكم يا اخوان وينصركم على كل عدو
 ودشمان ويستلم لكم الغلمان بحرمة بيت الحكمة وفديم الزمان يا امير
 النحل يا عليا يا عظيم تمت —

Then, facing the assembly, he says: "Forgive us, O brothers, any errors or negligences, any addition or omission; for all men are prone to negligence and forgetfulness, and absolute perfection pertains only to your Master—thou exalted!—to the glorious one, whose knowledge is all-surpassing. This homage to God and to you, O brothers, O believers"—سأخونا يا اخوان من الغلط—والسهيان والزيادة والنقصان لانه كل انسان يسهى وينسى وما تم الكمال الا لمولاهم عليا ذى الجلال وهو فوق كل ذى علم عليهم وهذه الطاعة لله and kisses the ground, which the assembly, likewise, do, responding to him: "To God be thy homage paid, O our chief and lord"—ضاعتك لله يا شيخنا وسيدنا—after which, standing up all together, they kiss the hands of one another, on the right and left, and near by; and, at the same moment, the candles are extinguished, when it is day, and the master of the festival gives alms, that is, dirhams, to the Imâm and the ministering Pursuivant, as well as to all who have joined in the recitations.

Then the Imâm takes in his hand the Summary, and reads a little of it to the assembly, and bids them bend, which they do as before; and, after that, directs him who sits on his right to read the Right-hand Invocation (see p. 279), and then directs all to recite the Chapter of Salutation (see p. 250), and, when this is done with, bids him who sits on his left to read the Left-hand Invocation (see p. 281), and, at the close, says: "This homage to God and to you, O brothers, O all ye who are present"—هذه الطاعة لله ولكم يا اخوان يا من حضر, kissing the ground, while the assembly do likewise, and also kiss the hands of one another, on the right and left; whereupon the Imâm stands up, and uncovers his head, the assembly doing the same, and directs to recite the Chapter of the Opening, saying: "The Chapter of the Opening, O brothers, has to do with the subversion of the dynasty of 'Uthmân, and the succor of the people of 'al-Khusaibî, the Nusairîs"—الفاخرة يا اخوان فى ابداء الدولة العثمانية—واستظهار الطائفة الخصبية النصيرية. Frequently, to this ceremony is added a petition to their Lord for the overthrow of all Muslim rulers. In conclusion, the Ministers rise and place food before the assembly, presenting most of it to the Imâm, who distributes a little to those near him; after which they all eat and disperse.

Having thus recounted the ceremonies usually observed at the festivals of the Nusairîs, our author also specifies some customs which are peculiar to certain occasions. At the festivals in the month of Nîsân, of the 17th of 'Adhâr, and of the 16th of First Tishrîn, when they begin their prayers, there is placed before the Imâm a large basin of water, with twigs of olive, myrtle, or willow, in it; and, as soon as prayers are over, all uncover their heads, and the Dignitary stands up and sprinkles over them some of the water, and distributes a few of the twigs, which they set into their beehives, to obtain good luck. Whenever they recite the Chapter of the Bowing of the Head (see p. 248), they bend to the ground, excepting on the day of 'al-Ghadîr, when, in reading it, they raise their heads heavenward.

The author next gives some statistics respecting the number of people belonging to this sect, the names of the towns and villages where they live, and the number and names of their chiefs, or shaiyks, at the present time, distinguishing between the Northerners and Kalâzians in each group of localities of which he speaks. But it is unnecessary for us to follow him, here, farther than to state, that the Nusairîs reside in and around 'Adhanah, Tarsus, and Antioch, chiefly, it would seem, in the first of these localities, where about five thousand of them are said to have their habitations, who are mostly, it appears, of the Northerner-party; that, in the other two localities, also, the Kalâzians seem to be in the minority; that the Northerners are outwardly distinguished by their not shaving at all, and by their abstaining from certain articles of food and drink, which the Kalâzians make free use of; and that, among the Imâms of the Kalâzians, conjugal communism is said to be a law of hospitality, supported, in part, by a figurative interpretation of Kur. xxxiii. 49, and partly by inference from one of ten rules of life attributed to Ja'far 'aṣ-Ṣâdiq, enjoining "upon every believer to gratify his fellow-believers as he would gratify himself"—*فألوصية*

العاشرة منها هي الفرض اللازم والحق الواجب على كل مؤمن أن يرضى

لأخيه المؤمن كما يرضى لنفسه, which the Northerners understand to require only a readiness to impart of one's knowledge and property to a fellow-believer. It is also worthy of notice, that the common people among the Nusairîs are said to regard their Imâms as infallible, and as having bodies not subject to the ordinary necessities of flesh and blood.

The fourth section of this tract is expressly doctrinal, relating to a so-called Fall. We shall give a translation of the whole of it, together with the text:

"Fourth Section, on the Fall.

"All parties among the Nusairis believe that, in the beginning, before the world was, they existed as moving lights, and luminous stars, conscious of the distinction between obedience and disobedience, and neither eating, drinking, nor excreting, but beholding 'Alī 'Ibn 'Abū Ṭālib in sapphire splendor; and that they remained in this condition seven thousand and seventy-seven years, and seven hours; but that, then, they boasted of themselves, saying: 'Surely, he has created no nobler creatures than we are,' which was the beginning of their going astray. So 'Alī created for them an Intermediary, who held them under restraint for seven thousand years; after which 'Alī 'Ibn 'Abū Ṭālib appeared to them, and said: 'Am I not your Lord?' to which they replied: 'Certainly thou art.' After a while, he manifested to them the all-disposing power of the Supreme, and they fancied themselves apprehending him fully, supposing him to be one like themselves, which was a second step in their wandering. So he made the Intermediary visible to them, around whom they revolved for seven thousand and seventy-seven years, and seven hours; after which he appeared to them in the form of an aged chief, with hoary head and beard (by which form were tried the people of light, of the high light-world), and they imagined him to be such as was that form in which he appeared to them, and he said to them: 'Who am I?' and they replied: 'We know not.' Afterwards, he appeared in the form of a young man, with curled moustache, riding upon an angry-looking lion, and again in the form of a small 'child, and calling to them said: 'Am I not your Lord?' the same question being repeated on each manifestation. These three appearances of 'Alī, in old age, youth, and childhood, are explained by the Kalāzians with reference to the moon, 'Alī's appearance as a child being made the first, or the new moon, that as a youth the next, or the full moon, and that as an old man the last, or the waning moon. He was accompanied by his Expressed Deity, and his Communicator, together with the people of the orders of his holiness, namely, the first seven orders, constituting the great light-world; and, when he called to them, they imagined him to be one like themselves, and were in a maze, and knew not what to answer. So he created for them one who should put a stop to their doubting and wondering; and called to them, saying: 'I have created for you a lower sphere, and intend to cast you down into it; and I shall create for you fleshly habitations, and appear to you in an Intermediary akin to yourselves; and whosoever of you acknowledges me, and acknowledges my Communicator, and my Intermediary, him will I bring back hither; and whosoever rebels against me, out of his perverseness will I make an Adversary to confront him; and whosoever denies me, him will I shut up in vestments of degrading transformation. To this they replied: 'O Lord, suffer us to be here, magnifying thee with praise, and worshipping thee, and cast us not down into the lower sphere.' Then said he: 'Ye have rebelled against me; yet, had ye said: "O our Lord, we know nothing save what thou teachest us—thou art the inscrutable, omniscient One," I would have forgiven you.' Whereupon he made out of their perverseness devils and Satans, and out of the sins of those devils made

women; for which reason the Nusairis do not teach their forms of prayer to their women, as is explained in the Book of Light Handing, the Book of Proofs, and the Book of Confirmation. Afterwards, he appeared to them in the seven tabernacles, to wit: the first, called 'al-Ḥinn, wherein the name of the Archetypal Deity was Faḳaṭ, the Expressed Deity was Seth, the Communicator Jaddāh, and the Adversary Raubā'; after which he appeared to them in the tabernacle 'al-Binn, wherein the name of the Archetypal Deity was Harmas 'al-Harāmasah, that of the Expressed Deity Mashhūr, the Communicator 'Ādhari, and the Adversary 'Ashkā'; and in the third tabernacle, called 'at-Timm, wherein the name of the Archetypal Deity was 'Ardešhīr, that is, the pagan Ahasuerus, the Expressed Deity was Dhū Kinā', the Communicator Dhū Fikh, and the Adversary 'Iṭrifān; and in the fourth tabernacle, called 'ar-Rimm, wherein the name of the Archetypal Deity was Enoch, the Expressed Deity was Hindmih, the Communicator Sharāmih, and the Adversary 'Izrā'il; and in the fifth tabernacle, called 'aj-Jānn, wherein the name of the Archetypal Deity was Durrat 'ad-Durar, the Expressed Deity was Dhāt 'an-Nūr, the Communicator 'Ishādī, and the Adversary Sūfiṣṭ; and in the sixth tabernacle, called 'aj-Jinn, wherein the name of the Archetypal Deity was 'al-Barr 'ar-Rahīm, the Expressed Deity was Yūsuf 'Ibn Mākān, the Communicator Abū Jād, and there was no Adversary; and in the seventh tabernacle, called 'al-Yūnān, wherein the name of the Archetypal Deity was the Philosopher Aristotle, the Expressed Deity was Plato, the Communicator Socrates, and the name of the Adversary Darmail. In all of the tabernacles thus enumerated,* the Adversary or Satan consisted of three persons in one, namely, 'Abū Bakr, 'Ūmar and 'Uthmān. Afterwards, he appeared to them in the seven tabernacles of divine quality, from Abel to 'Alī 'Ibn 'Abū Ṭālib, named in the notes on the Third Chapter.

"The Fall here spoken of is the theme of the following lines by Shaikh Muḥammad Bin Kalāzū:

'At the remembrance of a time which I had before my fall, my tears overflow, and I sigh deeply, and cry out with a longing never satisfied, and a yearning; my heart is made sick with pain, and with my burn-

* These so-called tabernacles are pre Adamite gradations of human existence, from inferior to higher, corresponding, as appears, in reverse order, to the seven forms of degrading transformation, mentioned in the Second Chapter (see p. 238), which the Nusairis suppose themselves liable to fall into, for their delinquencies. Accordingly, the tabernacle of 'al Yūnān, i. e., the Greek race, represents the highest point which human existence reached, before the special manifestations of 'Alī in "the seven tabernacles of divine quality" began, and the first step in the downward course of those who fail to recognize 'Alī as thus revealed, which is called *الفسخ*, deterioration. Of the other tabernacles, that of 'aj-Jinn, i. e., the Genii, corresponds to *النسخ*, annulment of faculty; that of 'aj Jānn, i. e., the Demon, to *المسخ*, degradation; that of 'ar-Rimm, i. e., the Litter, to *الوسخ*, defilement; that of 'at-Timm, i. e., the Scum, to *الرسخ*, stagnation; that of 'al-Binn, i. e., the Fetid Place, to *القش*, wilting; and that of 'al-Ḥinn, i. e., the Sprites, to *القشال*, the waste-heap.

ing passion, because of the felicity of days whose glory is exchanged for humiliation, and security for fearfulness.

'We were in a sphere of glory, at the zenith of sublimity, coursing with angels in each green meadow, and from rivers quaffing choice water, pure honey, and milk, together with wine; while heaven and earth obeyed our bidding, by the permission of a Deity who made all things created, and even the Sovereign Deity—glory to his majesty! gave consent to our imploring petitions.

'At length it pleased God, whose decree is final, to say: "I shall cast you down to the mundane sphere, and manifest my being in an Intermediary of your kin, causing you to see my Intermediaries as one sees vapor on the plain, which the thirsty man supposes to be water, and, on reaching it, finds to be nothing real. So then, whosoever acknowledges me, when I appear among you in an Intermediary, and distinguishes me from human kind, him will I secure from fear and trouble, and save from all that is alarming and afflictive; he shall be restored, speedily, to his pristine state, and I will give him rest in the shade, on the green meadows of my garden."

'We acquiesced in the Merciful's words to us, and, falling to the sphere of humiliation, after being exalted, have trod, as prisoners, within narrow bounds, therein abiding while ages have revolved.

'Thee, O Ḥabāk, I supplicate, by a divinity which thou hast manifested, that we might find it as a kind among creatures, and which we have been empowered to behold and know, for assurance, by sight, of the production of the manifestation—thou, O Creator of the created, art above humanity in majesty, yet hast thou, as of human kind, been conversable, and shown mercy, and hast been angry with, and hast punished, all anthropomorphists, with an anger and a punishment ever going its rounds through the regions of transmigration—by an Expressed Deity, deriving origin and power from thee, without disjunction, separation, or distinction; by a mandate wherewith thou didst charge, on his appearance, Salsal, and also the Five Incomparables; by Pursuivants and Dignitaries, by Familiars next, by their associates the Purified, O Ramaḳ, I intercede with thee; by those Approved as to whatsoever thou hast tried them with; by seven lower orders next to them—lift me up from contrariety, and trial of misery, to a highland abode, amid gladness and gratification, where cup-bearing boys attend, and tiniest maids.

'Muḥammad Kālāzi, making invocation becomingly, cherishes hope; and I stand fast by the ancient covenant, abiding in the confession of the day of shadowing clouds'—

الفصل الرابع في الهبطة

ان كل طوائف النصيرية يعتقدون بانهم كانوا في البدء قبل كون العالم انوارا مضيئة وكواكب نورانية وكانوا يفصلون بين الطاعة والمعصية لا يأكلون ولا يشربون ولا يغيطون وكانوا يشاهدون على ابن ابي طالب بالظرة الصفراء فداوموا على هذا الحال سبعة آلاف وسبعة وسبعين سنة

وسبع ساعات فكفروا بذواتهم انه لم يخلق خلقا اكرم منا فهذه اول خطية ارتكبها النصيرية فخلق لهم حجابا يمسكهم سبعة آلاف سنة ثم ان على ابن ابي طالب ظهر لهم وقال الست بربكم قالوا بلى بعدما اظهر لهم القدرة فظنوا انهم يرونه بكلبيته لظنهم انه مثلهم فاخطأوا بذلك خطية ثانية فاراهم الحجاب فظنوا به سبعة آلاف وسبع وسبعين سنة وسبع ساعات ثم انه ظهر لهم بصورة شيخ كبير ابيض الراس واللحية تلك الصورة التي امنحن بها اهل النور العالم العلوى النورانى فظنوا انه على تلك الهيئة التى ظهر لهم بها وقال لهم من انا فاجابوا لا ندري ثم ظهر بصورة الشاب المفتول السبال راكبا على اسد بصورة الغضب ثم ظهر لهم ايضا بصورة الطفل الصغير ودعاهم ايضا وقال الست بربكم وقد كرر القول عليهم في كل ظهور ومعه اسمه وبابه واهل مراتب قدسه الذين هم المراتب السبع الاول العالم الكبير النورانى ولما دعاهم ظنوا بانه مثلهم واحتاروا ولم يدروا ما ذا يجيبون فخلق لهم من تأخرهم الشك والحيرة ودعاهم قليلا قد خلقت لكم دارا سفلائية واريد ان اهبطكم اليها واخلق لكم هياكل بشرية واطهر لكم في حجاب كجنسكم فن عرفى منكم وعرف بابى وحجائى فانى اردت الى هنا ومن عصانى اخلق من معصيته ضدا يقاومه ومن انكرنى اغلق عليه فى قصان المسوخية فاجابوا قائلين يا رب دعنا هنا نستج بحمدك ونعبدك ولا تهبطنا الى الدار السفلائية فقال عصيتموني فلو كنتم قلتم ربنا لا علم لنا الا ما علمتنا انك انت العلام الغيوب فكنت اغفو عنكم ثم خلق من معصيتهم الابالسة والشياطين ومن ذنوب الابالسة خلق النساء فلذلك لا يعلمون نساءم صلاتهم وهذه العبارة موجودة بكتاب الهفت وفى كتاب الدلائل وفى كتاب التأييد ايضا ثم ظهر لهم فى القعب السبع القعبة الاولى اسمها المحن وكان اسم المعنى فيها فقط والاسم شبيت والباب جداج والضد روبا وظهر لهم بعدها فى القعبة البن وكان اسم المعنى فيها هرمس الهرامسة والاسم اسمه مشهور والباب آدرى والضد عشقاء القعبة الثالثة اسمها الطمر وكان المعنى اسمه فيها اردشير اى احشورش الوثنى والاسم ذو قناء والباب ذو فقه والضد عطران والقعبة الرابعة اسمها الهرم كان اسم المعنى فيها اخنوخ

والاسم هندمه والباب شراره والصد عزرائيل والقبة الخامسة اسمها ألجان
 كان اسم المعنى فيها درة الدرر والاسم ذات النور والباب إشادى والصد
 سوفسط القبة السادسة اسمها ألجن كان اسم المعنى فيها البر الرحيم
 والاسم يوسف ابن مآكان والباب ابو جاد وكانت خالية من الصد القبة
 السابعة واسمها اليونان فكان اسم المعنى فيها ارستطاليس الحكيم والاسم
 افلاطون والباب سقراط واسم الصد درميل وفى كل هذه القباب المذكورة
 كان الصد اى الشيطان فيها بثلاثة اقانيم وهم واحد يعنون بتلك الاقانيم
 ابو بكر وعمر وعثمان وبعد ذلك ظهر لهم فى سبع قباب الذاتية التى هى
 من هاييل الى على ابن ابي طالب وقد مر اسماءهم فى تفسير السورة الثالثة
 وقال فى معنى ذلك الهبوط المذكور الشيخ محمد بن كلازو

ذكرت زمانا كان لى قبل هبطنى
 ففاضت عبرتى وزادت حسرتى
 ولاعج شوقا قد يأول ولوعة
 تعد فوادی من اليمر وحرقتى
 على طيب ايام تبدل عزها
 بذل ومن بعد الامان بحيفة
 فكنا بدار العز فى اوح العلى
 نسير مع الاملاك فى كل روضة
 ونسقى من الانهار ماء مختما
 وعسلا مصفى ثم لبنا بخمرة
 وتانى السماء والارض طوعا لامرنا
 باذن اله خائف الخليفة
 حتى اله العرش جلّ جلاله
 يطبع لنا عند السؤال بدعوة
 الى ان اراد الله يتمم حكمه
 فقال ساهبطكم الى دار الدنية
 واظهر ذاتى فى حجاب كجنسكم

وأريكم حجبى كسرأب البقية
 وحسبه الظمان ماء اذا أنى
 إليه فلم يوجد شيئاً حقيقة
 فمن قد عرفنى حين أظهر بينكم
 حجاباً ويفردنى عن البشرية
 فذاك آمنه من أخوف والعنا
 وأخلصه من كل هول وشدة
 ويرجع الى ما منه أبدى مسارعا
 وأسكنه فى ظل روضات جنتى
 رددنا على الرحمن ما ناله لنا
 هبطنا لدار الذل من بعد رفعة
 سلطنا قيودا فى حبوس مضيق
 نلج بها أعداد فاعت كره
 سألتك يا هيق بذات أظهرتها
 لنوجد لها كجنس بين البرية
 وتمكننا منها عيانا تيقنا
 لأتبات إيجاد الظهور بروية
 واثنت من الناسوت يا بارى الورى
 جللت ولكن هى ايناس ورحمة
 وسخند وتغذيب لكل مشبه
 يكر فى النحات دورا ورجعة
 باسم بدى منك اختراعا وقدره
 بغير انفصال وانفراذ وفرقة
 بأمر به امرته حين بدوه
 لسلسل أيضا خمسة البيتبية
 بنفباء بنجباء بمختص بعدهم
 بمخلصهم يا رمق اليك وسيلتى

بما نحن فيها به أمكنته
 بسبع مراتب بعدهم سفلية
 أقلنى من الترداد من محنة الشقا
 الى دار نجد فى حبور ونعمة
 وعبد بنى صاا واصغر خادم
 محمد كلازى يرتجى حسن دعوة
 وانى على العهد القديم مثبت
 مقيم على اقرار يوم الاضلة —

In the word هبف (Habak) here occurring, the *há'* stands for new moon (هلال), the *bá'* for full moon (بدر), and the *káf* for moon (قمر). The word رمف (Ramak) is an inversion of فمر (Kamar). The "regions" spoken of in this poem are the seven states of existence mentioned in the Second Chapter, and in the notes upon it. Such are the comments of our author.

Our author's fifth section, *بعض اشعار النصيرية الدينية*, consists entirely of specimens of Nusairian poetry, with explanatory remarks. Here we are informed that the Nusairis have given the following female names, to wit: Sa'dâ' (سعداء), Maiyâ (مايى), 'ar-Rabâb (الرباب), Zainab (زينب), 'Alyâ (علياء), Labnâ' (لبناء), and Lailâ (ليلى), to the seven so-called tabernacles* of divine quality, from Abel to 'Alî 'Ibn 'Abû Tâlib; that they compose verses in their praise, and pay homage to them, as women; and that such verses are called Brides of the Dîwân (عرائس الديوان).

From among the specimens of this sort of poetry published by our author we select the first for translation, together with a note upon it, and give also its text.*

"Verses by Shaikh 'Ibrâhîm 'aṭ-Ṭust, in praise of Mistress Zainab.

"Let me take a draught, O my friends, and gladden myself, in the air of Zainab, beauty of archetypal qualities;† for my morning-cup let me take a draught of choice wine, colored to ancient purple in its jars.

"My ecstasy with love of her runs wild, O my fellow; I am lost in wonder in describing her, and my tongue is tied.

"Daughter by the first birth, ten and four the number of her age,

* Following the express design of our author, we print all poetical texts of the Nusairis without correction of errors in syntax and prosody.

† That is, who unites all that is attractive in the qualities of the Archetypal Deity.

her light surpasses all lights; her hair falls in a veil of brightness, and we are sheltered beneath the circlet of her imperial crown; the broad, rimmed basin of her eye-brows is one brilliant light, the side-wise look of her eye is a fascination which deeply moves me; her face, with amber on both cheeks for foil, is like the new moon rising in light; whenever she smiles, a sweet perfume is exhaled, and there appears the flash of a softly lightening cloud of Yemen; her breast is smooth, like silk to the touch; therein is a red pomegranate, the rounding moon to a favored one.

"So I sought intercourse with her, and she said: 'No liking have we for the whore-monger;' I replied: 'Away with the pander in thy air, away with him who would breed a harlot-progeny; I am of the family of 'Aḥmad, allied to Ḥusain, connected with Junbulān, a Jindab, akin to Numairi' " *—

شعر للشيخ إبراهيم الحلوسي يمدح به الست زينب	
اسقياني احبتي والرباني	في هوا زينب زين المعاني
اسقياني من الصبوح رحيقا	عتقت في دنائها الارجوان
هام وجدى بحبها يا نديي	وحرت في وصفها وكل لساني
بنت بكر لها من العر عشر	واربع فاق نورها النيران
شعرها اسجف الضياء فحجبنا	تحت اكليل تاجها الكسرواني
حاجباها جابيتها نور زاهي	ظرفها غنجه سحر دهاني
وجهبها كالللال يشرق نورا	خالها عنبر على الوجنتان
واذا ما تبسمت فاح عطر	وبدا بارق الوميض اليماني
صدرها ناعم كلمس حرير	فيه رمان احمر شهر باني
فطلبت الوصال منها فقلت	ما لنا رغبة بمن كان زاني
قلت حاشا متيم في هواي	مغرم ان يكون نسل الزواني
نسيتي امدية من حسين	جنبلائي جندب نمبرواني —

The expression "ten and four the number of her age" alludes to the entrance of the moon upon its fourteenth day. The drinking of Zainab signifies the consummation of knowledge of her.

Passing over, now, several other pieces of poetry of which the moon, or Mistress Zainab, is the subject, and one in praise

* The writer thus declares himself of the true faith, and so entitled to claim the favor of the Deity represented in the person of this object of his admiration. Whoredom is here put for alienation from the one true God.

of the Deity, under no specific name, we come to some verses which express the peculiar views of the party of the Northerners, to whom, as before stated, the whole heavens represent 'Alî, while the Kalâzians hold the moon to be the special token of his presence with mankind. Of these the following specimen may suffice:

"Verses by Shaikh Yûsuf 'Abû Tarkhân, in praise of the Heavens.

"Rise, my fellow, with us; let us course on yellow and white thoroughbreds, to reach the monastery of Mâr Yuhanâ, by a night's late travelling; where are monks and servitors, and sundry devotees, under the power of a bride's hot blasts, the daughter of a presbyter.*

"Large at the hips, supple, of comely form is she, the beloved of Mâr Jurîs; she wears a loose veil, in color like the horizon, unruffled; and a yellow veil, and a great white veil unspotted; also a clear red veil, of high import, seen from far. The while her effluence descends upon created things, a world is exalted with sanctity; but, were her veils withdrawn, existence would become awry. Let her have assumed her stately mein, and thou wilt see prostrate monks, and lions, for fear of her, and for her majesty, glorifying and hallowing.

"She was a fire for Abel, disowned by the Adversary 'Iblîs; it was she who bore up the True God's prophet Enoch; she was a saving water to Noah, after that the devils were drowned therein; a fire to Abram she, a True Deity; and the fire of the prophet Moses was she; she was the Spirit who produced my lord Jesus; of her 'Aḥmad spoke in eulogy, and afterwards Mâr Kais.†

"Hidden is she in that wherein she appears to us, O fellow-mortal. All hail to her, the limitless, incomparable goal of my eyes! Not turning away from her, by her shall I be guarded; Yûsuf is a servant to the True God's people—my calling wholly changed"—

شعر للشیخ یوسف ابی ترخان یدح به السماء

ندی می قم بنا نسعی علی نجب من العیس

لنقصد دیر مار حنا بلیل ذات تغلیس

به الرهبان والعباد واصناف الشمامیس

وهم من حول هیفات عروس بنت فسیس

رداح عادة خودة شقیقة مار جرجیس

* The Virgin Mary, as "the bride of heaven," must be here referred to: though the description which follows refers only to phenomena of the heavens, an identification with the mother of our Lord is plainly expressed in the after-clause "she was the Spirit who produced my lord Jesus;" and there would seem to be an allusion to the Roman Catholic doctrine of "semper virgo" in the words "but, were her veils withdrawn, etc."

† In the original, مرفیس, which seemed to call for some emendation.

عليها برقع مرخى كلون الافق مطلوس
 وبرقع اصفر وابيض عظيم بغير تدنيس
 وبرقع احمر صافى رفيع الشان مطموس
 وهى طمشت على الاكوان جميع جلّ قدّوس
 فلو كشفت براقعها لعاد الكون معكوس
 ولو قامت ترى الرهيان سجودا والقساقيس
 لهيبتها وعظمتها بتسبيح وتقديس
 فهى نار لهايبل نكرها الضدّ ابليس
 وهى ايضا التى رفعت نبي الحفّ ادريس
 وهى ماء لنوح لما غرقوا فيها الاباليس
 ونار ابرام هى حقّ وهى نار النبي موسى
 وهى الروح التى ابدى منها سيدى عيسى
 واحمد دلّ فى خمّ عليها ثمر مار قيس
 لقد بطنت بما ظهرت لنا يا صاح تجنيس
 وها هى نصب اعيانى بلا حدّ وتقبيس
 وانى لا امل عنها بها قد صرت محروس
 وبوسف عبد اهل الحفّ شأنى كل منكوس —

Such are the poetic effusions contained in this section, evidently designed, as our author intimates, for impression on the popular mind; in some of which, indeed, a sensuous veil of imagery almost hides from view the dogmas which are intended to be set forth.

The sixth section, *فى بعض عقايد النصيرية*, on certain fundamental principles of the Nusairis, reads as follows:

"All the Nusairis believe that the spirits of the chiefs of the Muslims, firmly grounded in the science of their religion, assume, at death, the bodily form of asses; that Christian doctors enter into swine-bodies; that Jewish rabbis take the form of male apes; and, as for the wicked of their own sect, that their spirits enter into quadrupeds used for food, sceptics of note excepted, who, after death, are changed into male apes; while persons of mixed character, partly good and partly bad, become invested with human bodies in other sects. When a professor of some other belief apostatizes, and is united with them, they hold that, in past

generations, he was one of themselves, and that his birth within the pale of that faith which he abandons was consequent upon some crime which he committed.

"No member of any alien sect is admitted into their fraternity, as for the first time, unless he be a Persian, the Persians being believers in the divinity of 'Alī Ibn 'Abū Ṭālib like themselves; and, without doubt, their progenitors were of Persia and 'Irāk. In Jewish history, however, they are said to have originated in Palestine; and this statement is not groundless, inasmuch as they hold many principles in common with people of that country, such as the worship of the sun and moon. But, unquestionably, Magians are found among them, so that their worship may be of Magian origin, and they may be practising, at the present time, rites which are none other than Magian.

"As for one of their faith by birth, who apostatizes, their judgment respecting the separatist is that his mother was an adulteress among them, being of that sect whose creed he adopts.

"They simulate all sects, and, on meeting with Muslims, swear to them that they, likewise, fast and pray. But their fasting is after a worthless manner; and, if they enter a mosque in company with Muslims, they recite no prayer, but, lowering and raising their voices in imitation of their companions, curse 'Abū Bakr, 'Umar, 'Uthmān, and other persons. The simulation of sects is set forth by them allegorically, as follows: We, say they, are the body, and all other sects are clothings; but, whatever sort of clothing a man may put on, it injures him not; and whosoever does not thus simulate is a fool, for no reasonable person will go naked in the market-place. I will specify, however, a token by which the dissembler may be recognized: when a Nusairi disavows the worship of 'Alī Ibn 'Abū Ṭālib, it may be known that he sets light by his belief, since he could not so express himself without having abandoned his religion; or, when a Nusairi reveals his form of prayer, it is certain that he has apostatized, for thus says their lord 'al-Khuṣaibi: 'Whosoever discloses our testimony is forbidden our garden; and, if any one says to you: "Disclose and be guiltless," haste ye away.'

"A token by which members of the sect recognize one another is as follows: if a stranger comes among his fellow-believers, he inquires: 'I have a relative*—do ye know him?' to which they reply: 'What is his name?' and he says: 'His name is 'al-Husain,' when they rejoice: 'Ibn Hamdān,' and he adds: 'al-Khuṣaibi;' a second token consists in their saying to the stranger: 'Thy uncle was unsettled—for how many periods?† to which if he replies: 'Sixteen,' they receive him; a third is the question: 'If thy uncle should thirst, whence wouldst thou give him to drink?' to which the answer is: 'From the fountain of

* See pp. 245, 278, 293.

† An allusion to ages of doubt prior to the revelation of "indubitable truth," probably to those successive stages of divine manifestation, sixteen in number, from the aged chief down to the human 'Alī, which are mentioned in the fourth section of this tract (see p. 286). "Thy uncle was unsettled" means, in the language of the Nusairis, who use "uncle" for "preceptor" (see, e. g., p. 233), that there was no certain teaching.

'All-quality;' a fourth is this inquiry: 'Should thy uncle's feet sink in the sand, whither wouldst thou direct him?' the answer to which is: 'To the Serpent of Mu'āwiyah;'^{*} a fifth is the following question: 'Should thy uncle annoy, where wouldst thou meet him?' to which one answers: 'In the Pedigree-chapter;'[†] a sixth consists of the following dialogue: 'Four, two fours, three and two, and as many more twice over, in thy religion—what place have they?' answer: 'In the Journeying-chapter;'[‡] question: 'Portion them out to me—wilt thou?' answer: 'Seventeen of them of 'Irāk, seventeen of Syria, and seventeen unknown;' question: 'Where are they to be found?' answer: 'At the gate of the city of Harrān;' question: 'What is their employment?' answer: 'They receive justly, and render justly.'

"The binding adjuration among the Nusairis, universally, is to place one's hand in that of another, saying: 'I adjure thee by thy faith, in the faith of the covenant of 'Alī the Prince of Believers, and by the covenant of 'Ain-Mīm-Sin;' this makes it obligatory to speak the truth. Another form is to moisten a finger with one's spittle, and place it on the other's neck, saying: 'I am absolved of my sins, and lay them on thy neck' and I adjure thee, by the foundation of thy religion, by the mystery of the covenant of 'Ain-Mīm-Sin, that thou tell me the whole truth touching such or such a matter;' which also debars from falsehood. The latter form of adjuration is more established with the Northerners than among the Nusairis of other parties; whoever takes it falsely, supposes himself to assume all the sins of the adjurer.

"All the Nusairis imagine the eminent chiefs of their sect to have no sexual intercourse with their wives; but that they make passes over them, by which they conceive.

"If any one who has abjured their faith passes by when they are at prayer, that prayer is spoiled, and they repeat it over again. They must not pray at all on the same day that they hear a story told"—

ان النصيرية كافة تعنعد بان شرفاء المسلمين الراسخين في العلم اذا ماتوا تحل ارواحهم في هياكل الحمير وعلماء انصارى في اجسام الخنازير وعلماء اليهود في هياكل الفروء واما الاشرار من طائفتهم تحل ارواحهم في المواشي التي تؤكل ولكن الخاصة المشكون في الديانة فبعد موتهم يصيرون قروءا والمترجون اما ذو الخير والشر ينقمصون الى هياكل بشرية عند الطوائف الخارجة عنهم واذا كان احد من غير مذهبهم ارتد عن مذهبه واتصل معهم فيعتقدون بانه في الاجيال الماضية كان منهم ولسبب خطية بدت منه ولد في ذلك المذهب الذي خرج عنه وقبلا لم يقبلوا احدا من الطوائف الغريبة الا ان كان من العجم لان اهل العجم يعتقدون بالوهية

^{*} Meaning, of course, 'Alī, the biter of the heel, as it were, of Mu'āwiyah, who nevertheless brought to an end his temporal dominion.

[†] See p. 241.

[‡] See p. 258.

على ابن ابي طالب نظيرهم وبلا شك سلفاؤهم من العجم والعراق ولكن
فى تواريخ اليهود قيل أنهم من بنى فلسطين وهذا صحيح ايضا لان عندهم
كثير من اعتقادات الفلستانيين كعبادة الشمس والقمر ولا بد ان تكون
الطايفة المجوسية موجودة بينهم من حيث ان عبادتهم هى مجوسية وهذه
العبادة عينها الآن عندهم واما من ولد فى مذهبهم وارتد الى غيره فيحكمون
على الخارج عنه بان أمه زنت فيه من ذلك المذهب الذى دخل فيه
وانهم يتظاهرون فى جميع الطوائف وان لقوا المسلمين يحلفون لهم
ويقولون نحن مثلكم نصوم ونصلى فالصوم يوجهونه على الرضاة واذا
دخلوا المسجد مع المسلمين فلا يتلون من الصلوة شيئا بل يخفضون
ويرفعون مثلهم وبشتمون ابا بكر وعمر وعثمان وغيرهم ويسمون المتظاهر
فى الطوائف بمثل وهو قولهم اننا نحن الجسد وباقى الطوائف هم لباس
فاى نوع يلبس الانسان لا يضرة ومن لا يتظاهر هكذا فهو مجنون لانه
ليس باقل يمشى عريانا فى السوق لكنى اوضع علامة يعرف بها المراءى
وهى متى قال انى برئى من ان اعبد على ابن ابي طالب فحينئذ يعرف
انه حشد معتقده فلا يمكنه ان يقول هذه الكلمة الا ان ترك ديانتة او متى
ما باح بصلاته فقد خرج من مذهبه لانه هكذا يقول سيدهم الحصبى

..... من باح بشهادتنا فحرمت عليه جنتنا

وان قال لكم احد بيجوا وتبرأوا فمجلوا بمدا

اعتناكم

واما العلامة التى بها يعرف بعضهم بعضا فهى ان اتى غريب الى بين
النصيرية يسألهم ويقول لى قريب فهل تعرفونه فيجيبون ما اسمه فيقول
لهم اسمه الحسين فيجيبونه ابن حمدان فيقول الحصبى والعلامة الثانية
يقولون للغريب شاش عمك كم دور فان اجاب ستة عشر يقبلوه العلامة
الثالثة ان عطش عمك من اين تنسقيه الجواب من عين العلوية العلامة
الرابعة ان غاط عمك فاذا تهديه الجواب لحية معاوية العلامة الخامسة
ان ضاع عمك فاين تلاقيه الجواب بالنسبة العلامة السادسة اربعة واربعين
وثلاثة واثنين وقدرهم مرتين فى دينك اين الجواب بالمسافة سوال اقسام

لى ابيهم جواب منهم سبعة عشر عراقى وسبعة عشر شامى وسبعة عشر مخفى سوال ابن يوجودون جواب على باب مدينة حران سوال ما يعملون جواب ياخذون بالحق ويعطون بالحق

أما اليمين الثابتة عند النصيرية كافة فهي أن تضع يديك فى يده وتقول احلفك بأمانتك عقد على أمير المؤمنين ويعقد ع م س فلا يمكنه بعد هذه اليمين أن يكذب وأيضا بلّ اصبغك بريقك واجعلها فى عنقه وتقول تبريت من خطاياى واوضعنها فى عنقك واحلفك أيضا باساس دينك بسرّ عقد ع م س أن تخبرنى عن حجة امر كذا فلا يمكنه الكذب بعد هذا وهذه اليمين ثابتة عند الشمالية أكثر من شركائهم وبظن الخالف بهذه اليمين كاذبا انه قد اخذ كل خطايا المستحلف له والنصيرية كافة تظن بان شيوخ طايقتهم الخاصة لا يضاجعون نساءهم بل يبرون من فوقهم وبهذا تحمل نساؤهم وعند ما يمر احد خارج عن مذهبهم فى وقت صلاتهم تفسد تلك الصلوة فيعودون الى خلافتها واذا حدثهم لا يجوز لهم فى ذلك النهار ذكرها —

The seventh section of this tract is a narrative of the author's discovery of the deeper mysteries of the Nusairis, فى كشف أسرار الخاصة فى النصيرية. It concerns us chiefly for certain doctrinal statements contained in it. The author had been for three years a novitiate, and was suspected of heretical opinions, when, at length, he bribed one of the chiefs of the party of the Northerners to tell him "the hidden mystery," and received the following communication :

"Know, O my son, that the heavens are the impersonation of 'Alī 'Ibn 'Abū Tālib, namely, that hidden garden, beneath the Place of Rest, which the *Kurān* speaks of in the words: 'beneath which flow rivers' —of which rivers the first is a river of wine, in color red, whereby is determined the seeing of the heavens as red by our lord the Expressed Deity, that is, Muḥammad; the second, a river of milk, in color white, which is what is seen by the Communicator, that is, by Salmān 'al-Fārsī, for he beholds the heavens as white; the third, a river of honey, in color yellow, which determines the seeing of the heavens as yellow by the angels, that is, the stars; the fourth, a river of water, which is what we see, for to us the heavens appear like water.

"When, however, we are purified from these human grossnesses, our spirits will be elevated amid the clustered stars which form the milky way, and we shall be clothed with spiritual habitations, and shall then

behold the heavens as yellow.* But if, during this present transient life, we doubt respecting the heavens [as the manifestation of 'Alī], our spirits will enter into bodies of degrading transformation, and there will never be any deliverance for us. As for people of other sects, who disbelieve in this our doctrine, they will become sheep and wild beasts, or assume other forms of degradation, and will never be purified.

"Know thou, also, that the sun is lord Muḥammad, who himself has been one with every prophet who has appeared in the world, from the tabernacle of 'al-Hinn to Adam, and down to Muḥammad, even as our chief and lord 'Abū 'Abdallāh 'al-Ḥusain Bin Ḥamdān 'al-Khuṣaibī has informed us, in these words of his Diwān:

"'If their number were a hundred thousand, the whole would always amount to one.'

"Know thou, furthermore, that the moon is Salmān 'al-Fārsī, and that these stars† are the angels who existed before the world was, constituting seven orders, one above another, namely: the eldest of them all,‡ lord 'al-Miklād, identical with the star Saturn, which also bears the name of Mikhā'il; and the star Jupiter, which is 'Abu-dh-Dharr, and also bears the name of 'Asrāfil; and 'Abdallāh 'Ibn Raḡvāḥah 'al-'Anṣārī, who is the star Mars, identical with the angel 'Izrā'il, who arrests spirits existing in the world—the proof of which is that this star disappears from its place when any human soul is departing; and 'Uthmān Bin Maḍh'un 'an-Najāshī, who is the star Venus, and, as one of the angels, bears the name of Dardiyā'il; and the star Mercury, which is Kanbar Bin Kādān 'ad-Dūsi, and, as an angel, also bears the name of Saldiyā'il§ (—the offices of each of whom, says our author, are specified in the notes on the Fifth Chapter¶). The other seven orders form the milky way, and are the spirits of those who have been translated from humanity, for their acknowledgment of 'AMS, as well as of every one of the manifestations, from the tabernacle of 'al-Hinn to 'Alī 'Ibn 'Abū Ṭālib. Of these two groups of sevens (both of which, adds our author, have been spoken of in the notes on the Seventh Chapter¶), the first forms the seven heavens, and the second the seven earths, mentioned in the Qurān.

* It should be observed, that the preceding allegorical interpretation of the clause quoted from the Kurān expresses a graduated difference of aspect in which the Supreme Deity is supposed to present himself to the various orders of created existence: comp. our author's note on the First Chapter (p. 237), and the colors of the bride's veils described on p. 294.

† That is, the planets, called "the Seven Twinkling Stars" in the Third Chapter (p. 239).

‡ Lit., "their Kabīr," كَبِيرٌ.

§ The original text has صَلْبِيَّائِيل, which we have ventured to change to صَلْدِيَّائِيل, supposing this name to signify "Receptacle of the Deity," دِي being the sign of the genitive, and صَل having its cabbalistic import, as explained in the *Kabbala Denudata*, i. 1, p. 604. Dardiyā'il may be similarly interpreted: see *Kab. Denud.*, *ibid.*, p. 259. Comp. the epithet كَنَّةُ الذَّاتِ الْعَالِيَةِ applied to the human 'Alī on p. 242.

¶ See p. 248.

¶ See pp. 251-2.

"Also, know thou that one and the same Archetypal Deity is in each of the four stages of light, namely: the first, called the stage of surmise, made by the first glimmering of day amid dark clouds, which is lord Salmân, whose appearance unveiled would cause the earth to vanish with all that is upon it, not a man surviving; the second, called the stage of effulgence, made by the day-beam; the third, called the morning-stage, made by the arching sun—to which three those words of the Right-hand Invocation allude: 'thy form, thy man-like form of existence, whether at day-break, or in the twilight-dawn, or in the hours of advancing day;'* and the fourth, called the zenith-stage, made by the [illuminated] heavens: all of which stages we hold to be substantially one. The voice of the thunder-bolt, too, is the voice of the Archetypal Deity 'Alî Bin 'Abû Tâlib, calling out in these words: O ye my creatures, acknowledge me, doubt not of me, and recognize my Expression and my Communicator, and the inhabitants of the orders of my holiness"—

اعلم يا ولدى ان السماء في ذات على ابن ابى طالب وفي الجنة الباطنة
دون الجنة المأوى التى ذكرها القرآن بقوله تجرى من تحتها الأنهار فالنهر
الاول نهر الحمر لونه احمر وهو ان السيد الاسم اى محمد يرى السماء حمراء
والنهر الثانى نهر اللبن لونه ابيض وذلك نظره الباب اى سلمان الفارسى
فيراها بيضاء والنهر الثالث نهر العسل لونه اصفر وهو ان الملائكة اى
الكوكب يرونها صفراء والنهر الرابع نهر الماء وهو نظرتنا لاننا نراها كالماء
ولكن مى خلصنا من هذه اللثايف البشرية ترتفع ارواحنا الى بين تلك
الكواكب المتلاصقة فى بعضها التى هى درب التبان ونلبس هياكل نورانية
وحينئذ نرى السماء صفراء وان شككنا فيها فى هذه الحيوۃ الغانية تحل
ارواحنا فى اجسام المسوخية وليس لنا تجاه الى ابد الابدین واما باقى
الطوائف الخارجة عن هذا الاعتقاد فمنهم الغنم والوحوش وسائر
المسوخات وليس نهم خلاص ابدا واعلم ايضا ان الشمس هى السيد
محمد وهو كل نبى ظهر فى العالم من قبة الحن الى ادم والى محمد كما
اخبر بذلك شيخنا وسيدنا ابو عبد الله الحسين بن حمدان الخصيبى من
ديوانه بقوله

لو انهم مائة الف فى تعدادهم لعاد فى واحد
عودا بلا امد

واعلم ايضا ان القمر هو سلمان الفارسي وهذه الكواكب ١٢ الملائكة الذين كانوا قبل كون العالم ١٣ سبع مراتب احدها تغلو الاخرى وكبيرهم السيد المقداد الذى هو كوكب زحل واسمه ميكائيل واما كوكب المشتري فهو ابو انذر واسمه اسرافيل واما عبد الله ابن راحة الانصارى فهو كوكب المريخ وهو عزرائيل الملاك الذى يقبض ارواح العالم والدليل على ذلك ان النجم يختفى من مكانه حين مغارفة نفس الانسان واما عثمان بن مضعون النجاني فهو كوكب الزهرة واسمه بالملائكة درديائيل واما كوكب عطارد فهو قنبر بن كادان الدوسى واسمه بالملائكة صلد ياييل مغايل هذه الخمسة مَر ذكرها فى تفسير السورة اُخامسة واما السبع المراتب الاخرى فهى درب التبان وهى ارواح المنتقلين من البشر بافرارهم بعس وبكل ظهور من قبة الحق الى على ابن ابي طالب واما الاسبوع الاول فهو السموات السبع والاسبوع الثانى السبع الاراضى المذكورة فى القرآن وقد مَر ذكرها فى تفسير السورة السابعة واعلم ان النفط الرابع فى معنى واحد فالنفطة الاولى التى اسمها الوحيية فى اللمع الظاهر من الغمام الذى هو السيد سلمان ولو ظهر بدون حجاب لغابت الارض وجميع ما عليها ولا يبغى انسان حيا على الارض والنقطة الثانية اسمها الغبضية وهى عمود الصبح والنقطة الثالثة اسمها البكرية وهى قوس قزح والى هولاء يشبر دعاء اليمين بقوله صورتك صورة الوجود المثبته فى الضياء والظل والمدود والنقطة الرابعة اسمها المركبة وهى السماء والاربع نعتقدها واحدة واما صوت الرعد هو صوت المعنى على بن ابي طالب وهو ينادى قايلاً يا عبّادى اعرفونى ولا تشكوا بى واعرفوا اسمى وبابى واهل مراتب قدسى —

Here we pass over some sceptical objections suggested by our author, which led to no farther explanations, and take up the continuation of his narrative as follows:

"Then the chief undertook to present to me proofs of the divinity of the heavens, instancing the Prophet's words in the *Kurân*: 'Whithersoever ye turn, there is God's presence—God is omnipresent, omniscient,'* to which he added: 'Know thou that in the name of 'Alî there are three letters, and that the words for heavens, the twilight, the glimmering of

day, and the arching sun, all have three letters—which is a plain* proof of the correctness of our doctrine. Or hast thou not read the Chapter of Testimony in the *Dustūr*, which says: ‘he is immeasurable, illimitable, incomprehensible, inscrutable?’† and know thou, O my son, that sight cannot reach to the limit of the heavens, nor can any one behold them in their prime configuration, that is, their red aspect, save only the Expressed Deity.

“Know thou, also,” continued the chief, “that the dog of the Companions of ‘al-Kahf was an impersonation of ‘Alī ‘Ibn ‘Abū Ṭālib; that he appeared to the seven youths who had fled from the emperor Decian, in the form of a dog, in order to prove them, and to try their faith; and that so, inasmuch as they believed in him, they were elevated to the heavens, and became stars. Previously, he appeared to the children of Israel in the form of a cow, when they had grievously sinned, and the earth had well nigh swallowed them up; and so they who believed were delivered, while the doubting were engulfed in the earth, such as Korah and his company. In the *Kurān*, this cow is said to have been sacrificed, by which is meant that she was perfectly recognized. He appeared also to the people of Ṣālih, in the form of a camel, which they mutilated, that mutilation signifying a rejection, on account of which they perished, and their city was turned upside down. Many other of his manifestations we leave unnoticed”—

ثم اخذ يقدم لى يرايين لتثبيت الوهية السماء كقوله فى القرآن ابنى ما توليتم فثم وجه الله ان الله واسع عليم وقال لى اعلم انه من على ثلاثة احرف والسماء والشفق واللمع وقوس قزح لكلّ منهم ثلاثة احرف فهذا الدليل الواضح على حقّة مذهبنا اما قرأت فى الدستور الذى هو سورة الشهادة بقوله لا يحاط ولا يحصر ولا يدرك ولا يبصر فاعلم يا ولدى ان البصر لا يدرك حدّها ايضا ولا احد يراها بصورتها الاصلية التى هى النظرة الحمراء الا الاسم فقط واعلم ايضا ان كلب احباب اللهف هو ذات على ابن ابنى طالب وانه ظهر للفتية السبعة الذين هربوا من دفيانوس الجبار بصورة كلب ليمنحهم ويرى امانتهم فلما آمنوا به ارتفعوا الى السماء وصاروا كواكب وقد ظهر لبنى اسرائيل فى صورة بقرة لما اخطأوا كثيرا وكادت الارض تبطلعهم فالذين آمنوا خلصوا والذين شكوا ابتلعتهم الارض كقارون ورفقائيه وقد يذكر ذكها فى القرآن ومعنى ذلك ابلاغ معرفتها وقد ظهر لقوم صالح بصورة الناقة فعقروها ومعنى عقرها المحجود فلذلك هلكوا وانقلب مدينتهم وصار اعلاها اسفلها وله ظهورات عديدة لا تحصى —

* See p. 255.

After this, our author was still more troubled with doubts, and became an avowed apostate from the Nusairian faith. But we are not concerned to dwell upon the details of his personal experience. Suffice it, that, the party of the Northerners having failed to afford him satisfaction, the Kalâzians were called in to reclaim him from heresy; that to their importunities he seemed, at length, to yield; that thus, after a while, he secretly possessed himself of a certain Book of the Hidden Sense (كتاب الباطني), in which was set forth the Nusairian belief, according to Kalâzian interpretation, but only to find even more of inanity than in the statements of the Northerners; that he sought, however, to satisfy his doubts by continued intercourse with the Kalâzians, and became a pupil to one of their Preceptors, but obtained no different views, except that the moon represents the Archetypal Deity, for his teacher said:

"Know thou, that the dark part of the moon is a person, bearing resemblance to humanity, who has two hands, two feet, a body, and a head, and upon his head a crown, and in his hand a sword, which is the notched blade of Muhammad"—اعلم ان السواد الذي في انعم هو شخص كالشخص له ييدان ورجلان وبدن وعلى بدنه رأس وعلى رأسه باج وبيده سيف ذو الفقار 'al-Fârsî; all of which is contrary to the belief of the Northerners, as before stated.

Then the Preceptor endeavored to convince him of the propriety of worshipping the moon, and first alleged, in favor of it, the following passage from the Kūrân: "each day, he is about some business."*

"Which," said he, "applies well to the moon, inasmuch as it every day appears in some special phase, growing gradually larger, day by day, to the full, and then turning about, and growing smaller and smaller, until it ends with being a new moon, yet without any change. To us, indeed," added the Preceptor, "he appears veiled, on account of sins which we formerly committed, in the beginning, when he tried us, while we were among the angels, and said: 'I intend to cast you down to the mundane sphere,' and we replied: 'Suffer us to be here, O our Lord, and we will magnify thee with praise'—for which cause he cast us down from amid the angels into this world, and our vision of him became veiled; nor shall we behold him otherwise than under a veil, so long as we abide in these bodies"—ثم اخذ يقدم لى براهين لتتبييت

عبادة القمر من القرآن وفي قوله هو كل يوم في شأن وفسرها وقال انها موافقة للقمر جدا لان كل يوم يظهر بنوع وهو انه يزيد في كل يوم ويبدأ الى حين كماله ثم يعود ايضا وينقص قليلا الى آخر استهلاله ولكنه بدون تغيير

* Kur., lv. 29.

وقد سجدنا عنه لاجل دنوبنا السالفة منا في البدء لما امتحننا ونحن بين
الملائكة وقال انى اريد ان اهبطكم الى دار الدنيا ونحن اجبناه قائلين دعنا
هنا يا رب نسبح بحمدك فلذلك اهبطنا من بين الملائكة الى هذه الدنيا
ووجدنا عن رؤيته ولم نشاهده غير هكذا ما دمننا في هذه الاجسام. The
Preceptor also brought up this passage: "God is the light of the
heavens and the earth,"* interpreting "the heavens" to signify
the seven orders of the great world, and "the earth" the seven
orders of the little world, already spoken of in the notes on the
Chapter of Salutation; and then he quoted from the Kurân, again,
as follows: "and hath set the moon therein for a light,"†
saying that the truth of the text before cited: "God is the light"
etc. depends upon its reference to the moon—قد صحت الآية اننى
قبلها وفي قوله الله نور السموات والارض بانها تشير الى القمر
In opposition to this confusion of the literal and the metaphorical, our
author here put in that other passage of the Kurân which says:
"and hath made the sun and the moon and the stars to serve
you;"‡ whereupon the Preceptor pronounced a curse upon all
suns, moons, and stars, spoken of in the Kurân as subordinate,
declaring them to be figurative expressions for 'Abû Bakr,
'Umar, and 'Uthmân; in proof of which he appealed to a tradi-
tion reported on the authority of the Prophet Muḥammad, that
he once greeted 'Abû Bakr with the words: "Welcome to the
sun of the habitable world, and its moon"—مرحبا بشمس البلاد—
وقمرها.

Moreover, the Preceptor said:

"Know thou, O my son, that the moon is the impersonation of 'Alī
'Ibn 'Abû Ṭâlib"—يا ولدى اعلم ان القمر هو ذات على ابن ابي طالب—
according to those words of the *Dustûr*: 'and the appearance of the
Archetypal Deity from amid the sun,'§ together with that passage in the
Imâm-chapter, the Twelfth, where 'Alī 'Ibn 'Abû Ṭâlib is called 'the
light of darkness';"|| and, when to this our author objected that, in
one of 'al-Khusaibī's melodies, the Deity is addressed as the "manifest
one, not absent from us,"¶ whereas the moon does absent itself, the
Preceptor replied that visible lights are never wholly wanting to the
Deity; that, when the moon withdraws, he appears in the sun; and,
when sun and moon withdraw, that he appears in the stars—which he
claimed to be proved by the fact that the several words for moon, sun,
and stars are tri-literal, like the name of 'Alī—انهم لا يخلو من الانوار—
الظاهرة ان غاب القمر يظهر في الشمس وان غاب الشمس والقمر فيظهر في

* Kur., xxiv. 35.

§ See p. 255.

† Kur., lxxi. 15.

|| See p. 257.

‡ Kur., xvi. 12.

¶ See p. 282.

النجم والدليل على صحة ذلك أن القمر ثلاثة أحرف والشمس ثلاثة أحرف والنجم ثلاثة أحرف فيظهر فيهم على ابن أبي طالب لأن من اسم على "and if," said he, "thou wouldst pray when neither sun nor moon nor stars are discoverable amid the clouds, thou must take in hand a silver dirham, and, when thou hast read the Sixth Chapter, thou must regard the rim of the coin; and whosoever, after having been instructed, is without his white coin, falls short in duty; for says our lord Shaikh Hasan Bin Makzûz 'as-Sinjâri, in his Kaşidah :

"And have paid their debt, glorying, with a dînâr on which is the stamp of thy name"—ثُمَّ ان أردت الصلوة ولم يوجد هؤلاء بواسطة—

الغمام فيجب انك تحوى معك درهم فضة ولما تقرأ السورة السادسة تنظر في نثرة القرش وكل من يخلو منه القرش الابيض من المرشدين ليس هو صالحا لان سيدنا الشيخ حسن بن مكزوز السنجاري قال في قصيدته

وحلوا الغمخ دينار عليه باسمك النقش —

"Know thou, moreover," continued the Preceptor, "that the cow mentioned in the Kurân was 'Alî Ibn 'Abû Tâlib, who was, likewise, the camel of Sâlih; in which two forms he appeared in order to prove the people of the time: and as for the dog of the Companions of 'al-Kahf and 'ar-Raḳim, that was Salmân 'al-Fârsî.

"Such is the true doctrine, which thou must hold in order to be saved. Thou hast also to fulfill the indispensable requirement and incumbent duty"—

ثم اعلم ان البقرة المذكورة في القرآن هي على ابن ابي طالب وهو ناقة صالح قد ظهر على هاتين الصفتين ليمنحن اهل ذلك العصر واما كلب احباب اتليف والرقيم هو سلمان الفارسي فهذا هو المذهب الصحيح الذي لا يمكنك لخلاص بدونه والغرض اللازم والحق الواجب يجوز لك تقديمه —

The closing injunction of the Kalâzian Preceptor had reference, it appears, to the usage of conjugal communism, already noticed as peculiar to the Kalâzian party; and our author alleges the testimony of a Nusairian chief, in the presence of several Greeks and Armenians, to the fact of the general prevalence of this usage among the Kalâzians.

These statements respecting the Kalâzian interpretation of Nusairianism could not persuade our author to return to his old faith; yet, on condition of his outwardly conforming to Nusairian rites, he was still tolerated among the Northerners of his native district. But a misunderstanding soon arose, and he began openly to controvert the Nusairian faith, both on the ground of its inconsistency with the Kurân and by arguments of reason. From this part of his narrative we extract the fol-

lowing passage, as an additional illustration of the Nusairian manner of dealing with the precepts of the *Kurān*, seeming to recognize their obligation, and yet virtually abrogating them by allegorical interpretation.

"Moreover," said our author, "the *Kurān* enjoins the fast of the month *Ramadhān*; whereas ye, not to say that ye are at variance with that authority, pronounce a curse upon every one who abstains from food. Your doctors, meanwhile, are not agreed as to what that fast signifies; for some say that the month *Ramadhān* stands for *Muḥammad*, and that fasting in that month is concealment of one's knowledge of him; some, that it stands for prayer, and that fasting therein is the making a secret of one's prayers; some, that the fast of the month *Ramadhān* is simply abstinence from indecency and iniquity—from which one may infer that indecency and iniquity are allowable in other months; some, that the fast in question signifies a man's keeping himself from his wife during the month *Ramadhān*, which is contrary to those words of the *Kurān*: 'ye are permitted to go in on the night of the fast etc.'*"—

ثم ان القرآن يأمر بصيام شهر رمضان وانتم فضلا عن مخالفتكم له تشتمون كل من يصوم وقد اختلفت علماءكم في ذلك الصيام فنهى من قال ان شهر رمضان هو محمد وصيامه كنتم معرفته ومنهم من قال انه انصلوة وصيامها هو كنهم ومنهم من قال ان صيامه لا يكون الا عن الفكش والمنكر فينتج من ذلك ان الفكش والمنكر حلال فعله في غيره من الشهور ومنهم من زعم ان الصيام هو امتناع الرجل عن امراته في شهر رمضان خلافا لقول القرآن احل لكم ليلة الصيام الرفث اليه —

The remainder of this section relates to the author's becoming a Jew, and then a Christian, and to the treatment he met with, in consequence, from the Nusairis. There is nothing in it which claims our notice, unless it be a passing intimation that the Nusairis offer sacrifices in honor of their departed chiefs, whose intercession is supposed to be thereby secured—واشتري منى خير—الذي يبيع الى قربتها لاسم شرفائهم الموتى†

The concluding section of this tract is wholly controversial, being an argument against the doctrines and rites of the Nusairis, and is of no importance to us.

It was our intention, after thus carefully following the steps of our author, to bring together the substance of what he com-

* *Kur.*, ii. 183.
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† *Comp.* p. 280.

munficates, as to each important historical or doctrinal point, in the form of a review, and to compare the belief of the Nuṣairīs, as here, for the first time, unfolded with any sort of completeness, with those other religious systems, Christian, Jewish, Sabian, and Muhammadan, and those speculations of Greek philosophy, to which it is related, either in the way of agreement or of contrast. But such a review and comparison may be more hopefully undertaken, perhaps, on another occasion. We, therefore, content ourselves, for the present, with having made known these very important original documents; nor shall we be sorry if some one more deeply versed in the history of religious opinion than we pretend to be, shall anticipate us in reducing to a scientific shape the materials here presented. They deserve to be handled by one who could do for the Nuṣairīs what the illustrious De Sacy did so thoroughly for the Druses.

ARTICLE VII.

ON THE ORIGIN OF THE LUNAR DIVISION OF THE ZODIAC REPRESENTED IN THE NAKSHATRA SYSTEM OF THE HINDUS.

BY REV. EBENEZER BURGESS,
LATE MISSIONARY OF THE A. B. C. F. M. IN INDIA.

Presented to the Society May 17th, 1865.

UPON presenting an essay on this subject, after so much has been written respecting it by the most learned men of Germany, France, Great Britain, and America, a few preliminary remarks seem called for by way of explanation. I had prepared an essay on the originality of the Hindu astronomy, to be appended to the Translation and Notes of the *Sûrya-Siddhânta*. But the work had become so much extended, that it was thought best by the Committee of Publication not to print it. A prominent object in that essay was, that I might express my views on some points in reference to which I had found myself at variance with Prof. Whitney—which views of my own, I being distant from the place of publication, had not found a place in the notes. The originality of the *nakshatras* in India was one of the topics I had prominently noticed. But I was allowed a limited space for a closing note to the Translation, in which I stated in brief the fact that I differed from Prof. Whitney in regard to some matters which he had treated in the notes, and mentioned what the principal points of difference were. This I did, as I then remarked, in order that I might feel free to revert to the subject at a future time. For reasons which I need not specify, I was prevented from doing this until after the appearance of Prof. Whitney's essay criticising the views of Weber and Biot on the *nakshatra* system, published in the Society's Journal (above, pp. 1-92). In the meantime, Prof. Müller had discussed the subject elaborately in the preface to the fourth volume of his edition of the *Rig-Veda*. The appearance of these two essays called my attention anew to the subject, and revived my intention of set-

ting forth my own views in relation to it. On taking up the subject again, I have the advantage of what these eminent scholars have written, and I have permitted their arguments, I think, to modify my own views in reference to whatever points truth required me to do so.

Another fact should not pass unnoticed in this connection: M. Biot, in his review of the translation of the *Sûrya-Siddhânta*, published in the *Journal des Savants*, having made numerous unfavorable criticisms on parts of the work—which were handsomely, and, in general, justly replied to by Prof. Whitney—was quite severe on my closing note, and especially on the fact of my continued adherence to the opinion that the *nakshatras* had their origin in India. As if there was something unreasonable in my not being convinced by his arguments in favor of their Chinese origin—to which Prof. Whitney seemed to have yielded. His style of remark seemed to be rather overbearing and unwarrantably condemnatory; and the fact that I had merely stated my opinion, without giving the reasons in detail, seemed to strike his mind much to my disadvantage—it being regarded by him as evidence that I was unreasonably holding on to preconceived opinions which had been shown by him to be untenable, by unanswerable arguments, which I had refused to consider. Here, then, is an additional reason why I wish to express my views more fully.

Of the conclusions to which the four distinguished scholars before noticed, who have written on the subject, have arrived, those of Prof. Muller accord most nearly with my own, although, in his arguments to support his views, he has laid himself open to criticism—which criticism he has received at the hand of Prof. Whitney. Prof. Muller strongly maintains the Hindu origin of the system, and, while some of his reasoning is open to objection, other parts are valid. And here I may be permitted to remark that the essential arguments, on which I rely to show the probable, if not certain origin of the *nakshatra* system in India, I had written out before I saw the essay of Prof. Müller or Prof. Whitney's criticism upon it; yet I am free to acknowledge that his facts and reasoning have contributed, as I think, to enlarge and render more definite my views of the subject.

Prof. Whitney, after occupying some seventy pages in criticising the views and arguments of Weber and Biot, sums up his own conclusions in the following language:

"This is the array of probabilities upon which I base my suspicion that the Hindus did not, after all, originate the primitive system of lunar asterisms represented to us by the *nakshatras*, the *manâzil*, and the *steu*. That it is but scanty, I freely admit: it is not of a character to compel belief, and I can quarrel with neither the candor nor the good sense of any one who shall

refuse to be moved by it. I only claim that it is sufficient to prevent us from maintaining with confidence and dogmatism the derivation from India, either directly or indirectly, of the *mandzil* and the *sieu*, and to lead us to look with expectation rather than with incredulity for the appearance of evidence which shall show some central or western Asiatic race to have been the inventors of the lunar zodiac."

This is both courteous and liberal. Yet I cannot but express a little surprise at the rather indefinite position which the language implies. For, after reading the severe criticisms which Prof. Whitney offered on the arguments of Prof. Weber, who maintains the mediate Hindu origin of the systems—after having read his emphatic declaration in reference to the arguments of Prof. Müller, who maintains the absolute Hindu origin of the system, that they "are untenable"—after reading very numerous expressions scattered all along through what he has written on the subject, implying a belief more or less definite in the superior claims to originality of the *sieu* on the one hand or of the *mandzil* on the other—I say, after reading all this, I was expecting a stronger word than "suspicion" with which to characterize his conclusion; I was expecting a definite utterance of disbelief in the Hindu origin of the system, with perhaps a formal recognition of the claims of the Chinese or Arabians to the honor of having originated this division of the zodiac. But I do not attempt to make out a case of inconsistency. I accept the final declaration of Prof. Whitney, as above quoted, as expressing his belief. And I am glad that there is no more radical difference between his position and my own.

My position in reference to the subject under discussion may be indicated by the following theses:

The lunar division of the zodiac represented by the *nakshatras* had its origin in India.

The *sieu* of the Chinese have no genetic relation with the Indian *nakshatras*.

The *mandzil* of the Arabians were directly derived from India.

In support of these propositions, my arguments are based upon the following facts and considerations: viz., the indisputable documentary evidence of the existence of astronomical discovery, knowledge, and culture in India, which involved the recognition and use of the *nakshatra* system, as early as from the fourteenth to the twelfth century before Christ; the absence of reliable evidence of the existence of the system either in China or Arabia or any other country at that early date or for some centuries after; some resemblances and discrepancies between the systems as now found in the three countries respectively; the state of astronomical and other knowledge in the countries named, and the evident course of communication of knowledge and influence between different nations at that early time.

The existence of astronomical discovery, knowledge, and culture in India, as early as the fourteenth, thirteenth, or twelfth century before Christ, is proved mainly by the recorded position of the solstitial and equinoctial points, found in fragments of ancient astronomical tracts that have been preserved, which can only be referred to that early date. The facts in relation to this point are briefly as follows:

At the time of the arrangement of the modern system of Hindu astronomy, as found in the *Siddhāntas*—which took place not far from A. D. 500, when the Hindu sphere was made to commence at the first of Mesha or the beginning of the *nakshatra* Āṇvina, that is, about 10' west of the star ζ Piscium—it was a received astronomical fact, the universal belief with Hindu astronomers, that the equinoctial and solstitial points had fallen back about twenty-seven degrees from the places they once occupied, according to the first recorded positions in their ancient books. The details of the evidence of this I proceed to offer.

In the *Graha Lāghava*, the rule for calculating the amount of the precession for any given time is to deduct 444 from the years of the Hindu *çāka* era, i. e. of Çālivāhana—and then reckon 1' for a year, or at the rate of 24° for 1440 years. The commentator says that others make the precession to be 27° for 1800 years, which would give the yearly rate of 54'.

The author says that, in the *çāka* year 444, the *ayanānça* (precession) was nothing. This year corresponds with A. D. 522. This remark in an astronomical treatise is valuable, as giving us a native date* for the arrangement of the modern Hindu astronomy as found in the *Siddhāntas*. The whole passage, with the commentary (though the work is comparatively modern), comes in as evidence of the general belief and understanding with Hindu astronomers, that, at the time when the Hindu sphere was fixed at the first of the sign Mesha and of the *nakshatra* Āṇvina—viz. 444 of their era, or A. D. 522—the equinoxes had fallen back 24° or 27° from the points they occupied at the time of the first recorded observations found in their ancient books. Twenty-seven degrees of precession, at the rate of 1° for 72 years—the true rate, nearly—require 1944 years; which, reckoned back from A. D. 522, brings us to B. C. 1422, or, allowing the Hindu rate, of 54' to the year, brings us to B. C. 1278.

In the *Sūrya-Siddhānta*, likewise, the rule for calculating the amount of the precession is evidently founded on the supposition

* Bentley, from a calculation of the longitudes of the junction-stars of the *nakshatras* according to data given in the *Siddhāntas*, makes this date to be A. D. 538, Prof. Whitney, by a similar calculation, makes it to come within the century preceding A. D. 560, or near A. D. 490 (see Translation of *Sūrya Siddhānta*, p. 211, and Jour. Am. Or. Soc. vol. vi., p. 355). The native date above given is probably reliable.

that the equinoctial and solstitial points had receded 27° since the first recorded observations were made, which time was 1800 years before the commencement of the sphere was fixed at the point it occupied when that treatise was compiled. The rule is a very bungling one (for the explanations see Translation, ch. iii., vv. 9–12), and is evidently derived from the supposed fact that the equinoxes had moved eastward 27° in about 1800 years.

Again, as a farther evidence tending to establish and prove this position, should be mentioned the fact that in the most ancient recorded lists of the Hindu *nakshatras* (in the texts of the Black Yajur-Veda and of the Atharva-Veda), Kṛttikā, now the third, appears as the first. This indicates that since that ancient arrangement the equinoxes had fallen back two entire asterisms, or $26^{\circ} 40'$, at the time when the vernal equinox was found to coincide with the beginning of the asterism Āṣvina. That is, the precession amounted to 27° wanting $20'$. (Trans. Sūrya-Siddh., i. 27, note, and Prof. Whitney's essay, p. 84.) This amount of precession carries us back 1920 years, which, if we adopt the date given in the Graha Lāghava, above alluded to, viz., A. D. 522, as that of the time when the precession was nothing, and the fixation of the sphere took place, brings us to B. C. 1398. The value of this argument, of course, depends upon the supposition—against which I know of no evidence or probability—that the order of the *nakshatras* in that part of the system was the same as nearly 2000 years later, and that the beginning was at the vernal equinox.

We are thus brought by evidence which it is difficult to set aside or essentially impair, to the conclusion that there were records of astronomical observations, that involve the knowledge and use of the *nakshatra* system in India, as early as the thirteenth or fourteenth century before Christ. An allowance of one or two centuries of variation, on account of indefiniteness of the data and the uncertainty of the date of fixation of the modern Hindu sphere, makes no essential difference in the argument; and one or two hundred years are all that we are required to allow on this account.

There is definite evidence in fragmentary notices of ancient records of astronomical observations which carry us back nearly as far as the dates above mentioned; and these appear to indicate a continuance of attention to the science of astronomy, and progress in its cultivation, rather than a diminution from the time of the first observations.

The following are examples of this evidence:

Sir William Jones quotes the following from the *Vârâhi-Saṁhitâ*, a work by Varâha-Mihira, who appears to have lived, as the extract shows, at the time the modern sphere was fixed—i. e.,

at the close of the fifth or beginning of the sixth century of our era :*

"Certainly the southern solstice was once in the middle of Âçleshâ, the northern in the first degree of Dhanishthâ, by what is recorded in former *shastras*. At present, one solstice is in the [first] degree of Karkatâ [Cancer] and the other in the first of Makara [Capricorn]. That which is recorded not appearing, a change must have happened; and the proof arises from ocular demonstrations; that is, by observing the remote object and its mark at the rising or setting of the sun, or by the marks in a large graduated circle, of the shadow's ingress and egress." Asiatic Researches, vol. ii., p. 391.

According to this statement, the equinoctial and solstitial points had receded $23^{\circ} 20'$: i. e. the southern solstice had moved back through half of Âçleshâ, or $6^{\circ} 40'$, the whole of Pushya, or $13^{\circ} 20'$, and $3^{\circ} 20'$ of Punarvasû—as it was at the time in the 10th degree of this latter asterism—in all, $23^{\circ} 20'$. This, at the rate of $50''$ a year, requires a period of 1680 years, which, reckoned from A. D. 499 (the date which Sir William Jones fixes upon), brings us back to B. C. 1181. Colebrooke coincides with Sir William Jones in the opinion that the record is a genuine one from Parâçara, and made when the colures were in the positions therein indicated. (Asiatic Researches, vol. ix., p. 357.)

But the following from the commentator of Varâha-Mihira, Bhaṭṭotpala, in reference to the above passage, is still more important. After saying that by "former *shastras*" are meant the books of Parâçara and other Munis, he cites the following from the Parâçara-Sanhitâ:

"The season of Çiçira is from the first of Dhanishthâ to the middle of Revatî; that of Vasanta from the middle of Revatî to the end of Rohiṇî; that of Grîshma from the beginning of Mrîgaçiras to the middle of Âçleshâ; that of Varsha from the middle of Âçleshâ to the end of Hasta; that of Çarad from the first of Chitrâ to the middle of Jyeshthâ; that of Hemanta from the middle of Jyeshthâ to the end of Çravaṇa." (Asiatic Researches, vol. ii., p. 393.)

This account of the six Indian seasons, each of which is measured by the time the sun occupies in passing through four lunar asterisms and a half, places the colures in the same position as the preceding extract from "former *shastras*" by Varâha-Mihira, showing that the work known as the Parâçara-Sanhitâ dates back to about B. C. 1181, and that its author, Parâçara, an ancient astronomer of great repute, lived at that time; and it is for this reason—that it identifies the time at which Parâçara lived—that Sir William Jones regards it as of so much importance

* Sir William Jones puts the date at A. D. 499.

in a historical point of view. But its astronomical or scientific importance is not less than its historical. It gives us an astronomical date, and indicates an important fact in the history of astronomy, which shows that at that time astronomy was receiving particular attention, and was cultivated on strictly scientific principles.

The same position of the colures is given in an ancient record, found in the *Jyotishas* of the Vedas. "To each *Veda* a treatise, under the title of *Jyotisha*, is annexed, which explains the adjustment of the calendar, for the purpose of fixing the proper periods for the performance of religious duties."* One of these tracts (which likewise contained another of the *vedāṅgas*, the *Çikshâ*) was brought to me by a Brahman, who represented it as belonging to the Rig-Veda. I afterwards found the passage to which I refer quoted by both Colebrooke and Bentley, and still later by Müller. The most important part of this record is in these words:

"When the sun and moon ascend the sky together, being in the constellation over which the *Vasus* preside; then does the cycle begin, and the [season] *Mâgha*, and the [month] *Tapas*, and the bright [fortnight] and the northern path."†

"The sun and moon in the beginning of *Dhanishthâ* always turn towards the north, in the month of *Mâgha*, and in the beginning of *Âçleshâ*, towards the south in the month of *Çrâvana*.

"In the northern course there is an increase of day and decrease of night amounting to a *prastha* of water; in the southern, both are reversed; in the course the increase and decrease are six *muhûrtas*."‡

* Colebrooke's Essays, edition of Williams & Norgate, London, 1858, p. 65.

† This is Colebrooke's version. Prof. Muller translates the verse:

"When the sun and moon ascend the sky together, being in the constellation over which the *Vasus* preside, then does the (quinquennial) cycle begin, and the (month) *Mâgha*, and the warmth, and the bright (fortnight), for the path (of the sun) is north."

Of this verse I have given the versions of both Colebrooke and Muller, in order to notice the difference between these distinguished scholars in the translation of the word *Mâgha*. If my Sanskrit Lexicon is to be taken as authority, both translations are warranted. I may remark that my native Pandit considered the word as the name of the month *Mâgha*, agreeing with Prof. Muller. This point is of some importance, as showing the full recognition and naming of the Hindu months at that early period. And we have farther evidence in the verse preceding those the translation of which is given above, as given by Prof. Muller (the verse is not in the copy in my possession):

"They" (the *vedāṅgas*) "teach the knowledge of time of the quinquennial lustrum, which begins with the light half of (the month) *Mâgha* and ends with the dark half of (the month) *Pausha*." I add parentheses enclosing the word *month*, as there is nothing in the original corresponding, though the meaning is implied.

‡ Colebrooke makes the following note on this passage: "I cannot, as yet, reconcile the time here stated. Its explanation appears to depend on the construction of the *clepsydra*, which I do not well understand; as the rule for its construction is obscure, and involves some difficulties which remain yet unsolved." (as above, p. 66.)

Colebrooke well styles this a "remarkable passage." It is certainly very valuable. It gives the position of the colures at the time of its record, such as to indicate an antiquity, as before observed, of about 1181 B.C.* And besides this, it proves conclusively that the Hindu months had been formed and named at that early period. This, it appears to me, is an important point in connection with our subject, as it has occasioned no small amount of discussion among our learned men, who have written respecting it. Bentley proved, to his own mind, that the Hindu months could not have been formed and named earlier than 1181 B.C., but thought they originated about that time. Prof. Müller represents Bentley as giving that as the period of their formation and receipt of their present names, and employs the fact as an argument for the antiquity of the *nakshatras* in India.† But Prof. Whitney, by elaborate calculations, proves that Bentley's reasoning is inconclusive, and that they might have been formed earlier; that in fact there is no limit in the nature of the principle of formation to the period within which they could have received their origin. But what is proved by the passage is—the names of two of the months being mentioned in it—that the system of months had been formed and names given to them, the same as they now bear, as early as the first part of the twelfth century B.C. But more than this is nearly the same as proved. The scientific cast of the record in the connection in which it is found proves that some matters in astronomy had been treated with approximate accuracy for centuries before. The position of the equinoxes had been noticed about 250 years before, which carries us back fully into the fifteenth century B.C. Now all this astronomical culture is connected with the *nakshatra* system. The names of the twenty-seven divisions of the zodiac are found in the *Jyotishas* of the *Rich* and *Yajush*, says Colebrooke, and in several places of the Vedas themselves.‡

* Colebrooke (Essays, p. 67) distinctly states that the cardinal points of the ecliptic were in the positions indicated in the *Jyotisha* record above given in the 14th century B.C. This mistake must have arisen either from his reckoning the rate of the precession as less than one degree for every 72 years, or, as is more probable, from his confounding in his mind, at the time of making the remark, the fact that *Krtikā* was formerly the first asterism, and hence the equinoctial points had receded back through two whole asterisms ($26^{\circ} 40'$), since the first recorded observation. This, at 1° for 72 years, gives 1920 years, which, reckoned back from A. D. 522, brings us to B.C. 1398. If we take a later date for the fixation of the modern Hindu sphere—as A. D. 560, and later than this we cannot go—we must deduct so much from that date. And if we take A. D. 499, which many native astronomers (as shown by Jones, *As. Res.*, vol. ii, pp. 392 and 398) regard as the date of the fixation of the present sphere—and which Prof. Whitney regards as possible (Translation of *Sūrya-Siddhānta*, p. 211, and *Journ. Am. Or. Soc.*, vol. vi., p. 355), we have B.C. 1421.

This mistake of Colebrooke with its cause is so obvious that it seems a little strange that Prof. Müller and others should take so much space in refuting it. It simply needs to be corrected.

† *Rig-Veda*, vol. iv., p. xxxvii.

‡ As above, p. 67.

Prof. Whitney admits that the names of the deities presiding over the *nakshatras* are found in the early texts, but seems to imply, as I understand him, that he thinks these names were used before they were applied to the asterisms. But Colebrooke affirms that they were actually applied at this early period to denote the constellations themselves.* And in point of fact, it seems to be a natural conclusion, that the division of the zodiac into the twenty-seven or twenty-eight parts was first made, and then the names invented and applied to them. But, however this may be, the earliest astronomical records and traditions among the Hindus were evidently connected with this division.

The sum of results thus far reached is—that we have scientific documentary evidence that the lunar division of the zodiac into twenty-seven or twenty-eight equal parts known as the *nakshatras*, or lunar mansions, was known in India as early as the first part of the twelfth century before our era; and that, not as a semi-mythological fancy, but in connection with a system of true science based upon veritable astronomical discovery, invention, and observation; and the evidence is scarcely less conclusive that the system was known and in use in India 250 years earlier, or in the fifteenth century before Christ.†

* As above, p. 67.

† Since writing the above, as my MS. was about to be sent to the press, I have received from Prof. Whitney his essay "On the Jyotisha Observation of the Place of the Colures, and the Date Derivable from it," published in the Journal of the Royal Asiatic Society of Great Britain and Ireland. It was dated June 1864. I have read this essay with great interest. Its object is to show the indefiniteness, un-
reliableness, and inaccuracy of the record, and its worthlessness for any use that can be made of it in founding a vedic chronology. The conclusion of Prof. Whitney is pretty fully shown in the following sentence (p. 327). "He who declares in favor of any one of the centuries between the eighth and eighteenth before Christ, as the probable epoch of the Jyotisha observation, does so at his peril, and must be prepared to support his opinion by more pertinent arguments than have yet been brought forward in defense of such a claim."

In regard to this conclusion or declaration, I simply remark, that, not so much from fear of the "peril" as from want of time and space, I do not attempt any reply to his arguments (the validity of many of the principal of which I do not admit); but I may admit the correctness of the conclusion implied in the sentence quoted, without essentially impairing my own argument as stated in the preceding pages. My object is not "to found a vedic chronology," but to show the antiquity of the knowledge and use of the *nakshatra* system in India. I can afford to deduct three or four centuries from the dates above given (so far as the indefiniteness shown by Prof. Whitney is concerned, they might be to be added), and still we have the clear irrefragable proof that this division of the zodiac was known and in use in India a thousand years before it was known in Arabia, and a number of centuries before it was known among the Chinese according to Weber, and about the same time it was completed there according to Biot. I say I may admit the conclusions of Prof. Whitney in regard to the point in question without essentially modifying my own arguments as stated above, when considered with reference to their object.

A strong point in Prof. Whitney's argument is that the Hindus had no instruments, that their astronomical observations were made by the unassisted eye alone. I think that what he has written on this point contains considerable unwarrantable assumption. But see below remarks in reference to this point.

Let us now turn to the other two nations, with each of which it has been claimed that the *nakshatra* system originated, viz. the Chinese and the Arabians. • And first in regard to the Chinese. It will be sufficient for my purpose to note a very few facts in connection with the history and progress of astronomy among that people; my object being simply to inquire what evidence there is that the system was known in China as early as I have now proved it to have been in India.

And first, I remark that we have in the theory itself of those who advocate the Chinese origin of the system a refutation of its claims. According to M. Biot, the principal if not the only advocate of the Chinese origin—Prof. Whitney, who at first gave a modified assent to M. Biot's position, having subsequently withdrawn it—twenty-four of the twenty-eight stars called *sieu* were selected and named in the time of the Emperor Yao, in the year B. C. 2357, and four others were added some twelve centuries later, or about B. C. 1100. Our first impulse is to exclaim: what kind of division of the heavens, whether the reference is to the ecliptic or to the equator, is that which is only completed twelve hundred years after it was commenced! Again, this completion by adding four additional members to the system was certainly some centuries subsequent, in point of time, to the knowledge and use of the system in India. See above.

Again, secondly, the evidence which Biot alleges in support of his position that twenty-four of the *sieu* were named as early as B. C. 2357 is by no means satisfactory. He maintains this principally on the ground of the proximity of the stars in question to the equator of that time. But Prof. Whitney has shown that this is an arbitrary assumption: that the selection might as well indicate an equator hundreds of years after, or at least that that precise date is not indicated.* Prof. Whitney shows that the whole of Biot's reasoning in regard to this point is only from inferential grounds, plausibilities; that reliable evidence, either scientific or documentary, is almost entirely wanting. And Prof. Weber, in opposing the views of Biot, maintains that the *sieu* as a system of twenty-eight determinant stars is not traceable in Chinese literature further back than to about B. C. 250; thus setting aside the facts and reasoning of the French scholar as not supported. This fact is certainly a very damaging one to Biot's theory of the great antiquity of the system.

Thirdly, the Chinese system of *sieu* differs from the Hindu system of *nakshatras*, both in its structure and its object. In this system the determinant stars are at distances from each other varying from one half-degree to upwards of thirty degrees, making the intervening arcs or spaces, which are likewise called

* See Prof. Whitney's criticism on this part of M. Biot's work in his Essay above quoted, pp. 34-38.

siew, to vary among themselves in the same manner. Their use was to mark the meridional transits of the sun, moon, and stars. Whereas the Hindu *nakshatras* divide the zodiac into twenty-seven equal parts. It is true that the names are applied to groups of stars located within these spaces, but this is simply to mark the spaces or arcs themselves. And this seems to have been the application of the names from the first. In the earliest definite astronomical records, as cited above, in which some of the *nakshatras* are named, and the whole system implied, the names are given to the arcs of the zodiac. This was as early as about B. C. 1181.*

The object of the *nakshatra* system was to mark the progress of the sun, moon, and planets through the heavens. Such seems to be the import of the word *nakshatra* itself. Wilson, in his Sanskrit dictionary, gives the etymology as from *naksh*, 'to go,' and *atran* or *kshail*, 'a kind of root.' The last element of the word seems to be indefinite or not well known, but, from the first element, we have the clear idea of 'progress, path.'† I am the more particular in this matter, from the fact that Prof. Whitney's remark in relation to it seems adapted to mislead, or not to give the whole truth. He says: "No one of the general names for the asterisms (*nakshatra*, *lha*, *dhishnya*), means literally anything more than 'star' or 'constellation:' their most ancient and usual appellation, *nakshatra*, is a word of doubtful etymology (it may be radically akin with *nakta*, nox, 'night'), but it is not infrequently met with in the Vedic writings, with the general signification of 'star' or 'group of stars': the moon is several times designated as 'sovereign of the *nakshatras*,' but evidently in no other sense than that in which we style her 'queen of night.'‡ This remark may be true in regard to the two latter terms, and the later use of the first, *nakshatra*, but this evidently has a literal meaning in its composition something more than simply 'star' or 'group of stars.' The first element, *naksha*, clearly means 'progress, path' (i. e. the path of the sun, moon, and planets), and this is so modified by the last, *atran*, that the word becomes a proper appellative for one of the equal parts into which the whole 'path or course' of the heavenly bodies is divided; it would then naturally be applied to the groups of stars that should be selected to designate these parts respectively. According to this explanation, the term *nakshatra* had at first a meaning and application, both as definite and as general as the more modern phrase 'signs of the zodiac,' and 'zodiac.'

But the essential point in this connection is that the *nakshatra*

* See above, p. 314.

† Prof. Muller (*Rig-Veda*, vol. iv., p. lxvi., note,) approves Yāska's derivation of *nakshatra* from the root *naksh*, having the sense 'to come, to approach.'

‡ Journ. Am. Or. Soc., vol. vi., p. 351; Trans. Sūrya Siddh., p. 207.

system in India had from the first a strictly scientific structure and application, and this structure and application differ radically from those of the Chinese *sieu*. And M. Biot, while maintaining the derivation of the *nakshatra* system from the *sieu*, admits that this latter system was modified in its structure, and applied to a different use, as it passed into India. But this modification and different application make it another thing.

Fourthly, there is another argument on which great reliance is placed in maintaining the derivation of the *nakshatras* from the *sieu*, or the reverse. This argument is based upon the fact of coincidence between the individual members of the two systems. I think this coincidence has been overestimated. In fact, I do not think it of any weight at all. The facts in the case are simply these: From a carefully prepared table by Prof. Whitney, it appears that there is an absolute coincidence between the determinant stars of only nine out of the twenty-eight—i. e. there are nine cases in which the *sieu* determinant star is the same as the junction-star in the corresponding *nakshatra*; in four other cases, the Chinese determinant is found among the group of stars embraced in the corresponding *nakshatra*; this number four might with a little allowance be extended to six or eight, so that we should have a full coincidence in nine out of the twenty-eight, or less than one-third, and a partial coincidence in eight more, or seventeen out of twenty-eight. This is certainly by no means remarkable, even on the supposition of the two systems being entirely independent of each other as to origin. And yet it is regarded by almost all the distinguished scholars who have written on the subject as settling the question as to the identity of origin of the two systems. For example, Prof. Whitney, after the table above alluded to, remarks: "after this exhibition of the concordances existing among the three systems"—he had included the *manâzil* of the Arabians—"it can, we apprehend, enter into the mind of no one to doubt that all have a common origin, and are but different forms of one and the same system;"* and Prof. Weber makes nearly the same remark. Other scholars share Prof. Whitney's confidence in regard to this conclusion. But I do not. And so far from it, I do not regard the coincidences as furnishing the basis of an argument of any weight whatever. Let us look at the circumstances of the case. Supposing two astronomers of the twelfth or twenty-third centuries B. C., or any other time, to undertake the division of the heavens into twenty-eight equal arcs or spaces, or to select through the whole circumference twenty-eight single stars or groups of stars, to mark these spaces, the one according to the principle of, and for the object of, the Chinese *sieu*, the other according to the principle of, and for the object of, the

* Journ. Am. Or. Soc., vol. vi., p. 345; Trans. Sûrya-Siddh., p. 201.

Hindu *nakshatras* — each being ignorant of the other's work and design—let one be at Pekin and the other at Delhi or Ujjayinî, or one at Bagdad and the other at Paris, or any other two places of nearly equal latitude north or south—let them complete their work, and is it not highly probable—is it not nearly certain, that at least one-third of the stars selected would be identically the same, and should we not expect that one half of the remainder would be nearly so; in short, should we not expect fully as great a number of exact and approximate coincidences as do actually exist between the *sieu* and the *nakshatras*? I certainly think so. In general, the most prominent stars would be selected by both astronomers, and this would secure exact coincidences in one-third of the cases, and an approximate coincidence in one-half of the remaining cases. And this is all that can be said respecting the coincidences in the two systems of which we are speaking.

But it is said that the coincidence in regard to twenty-seven or twenty-eight proves identity of origin, or at least affords a very strong support to such a theory. But is it so? In regard to this point, I remark, that twenty-seven (or twenty-eight) is the number that would naturally be selected if the object in view in the division was the one that is accomplished by the Hindu system. And twenty-four, the original of the Chinese system (according to Biot) is not an unnatural number, considering the object for which the system was formed. And the fact that the four, to make out the number twenty-eight of the *sieu*, were not added till after the system of twenty-eight *nakshatras* was known in India—probably not till centuries after—is conclusive against considering the coincidence in regard to the whole number as of any value as the basis of an argument.

But, fifthly, I cannot but mention, as adding not a little strength to my argument, the exceeding rudeness and vagueness and unscientific character of the astronomy of the Chinese, from its commencement to the time the Jesuit missionaries were placed at the head of their tribunal of mathematics. I use these terms, I think, with due deference to the opinions of M. Biot and other sinologues. M. Biot altogether overestimates the value of the materials which he used in forming his opinions, and I strongly suspect has failed in their correct interpretation in important respects. He at least draws important conclusions without adequate documentary evidence. Of doing this Prof. Whitney brings against him the direct accusation; and Prof. Weber does what amounts to the same, when he says that his (M. Biot's) views are "unceremoniously to be rejected as impossible."*

The materials from which M. Biot mainly drew his conclu-

* Essay of Prof. Whitney, p. 10.

sions⁸ are the writings of the Romish missionaries, and more particularly those of M. Gaubil. Respecting these he uses the following language: "The writings of Gaubil which I have mentioned contain, in substance, all the documents necessary to reconstruct with entire certainty the ancient Chinese astronomy in its primitive simplicity and originality; but some precautions are necessary if we would employ these materials with safety."*

Delambre, in his account of Chinese astronomy, makes use of the following language respecting the same author: "Here terminates the treatise on Chinese astronomy by M. Gaubil. We see that it contains only very vague notions, and no precepts which can give us the least light respecting the knowledge which the Chinese had of astronomy. And we can, without hazarding anything, say that astronomy was not born with the Chinese, notwithstanding the labors of so great a number of astronomers."

Delambre had, in his treatment of the subject, referred to the writings of other missionaries, but Gaubil is his prominent authority. Biot, likewise, has recourse to the writings⁹ of other persons, and to other documents; he even claims to have brought to light some original Chinese documents not known to the missionaries, but from these he does not deduce any new facts that should modify the conclusions to be drawn from the materials furnished by the missionaries. I am not aware that he claims for these other documents any great importance. M. Gaubil is his principal authority, as his language above quoted implies.

The statement of Delambre, as I think, fully sustains me in the use of the terms I employed in characterizing Chinese astronomy. The abilities and judgment of this astronomer are doubtless fully equal to those of Biot, and though the latter had the advantage of the advanced state of science over his brother of the preceding generation, yet his materials for forming an opinion on the subject in question were essentially the same.

My object in thus noticing the judgment of Delambre is to place in stronger light the ground of my suspicion—perhaps I should say opinion—that M. Biot and the missionaries who furnished his materials have misinterpreted—and hence misrepresented—not intentionally—the Chinese astronomical literature, when they date the formation of the system of the *sieu* as early as B. C. 2357.

But I must mention a few other facts leading to the same conclusion.

The emperor Yao sent four of his astronomers, one towards each of the cardinal points, to observe the stars that occupied the solstitial and equinoctial points respectively. They went,

* *Précis de l'Histoire de l'Astronomie Chinoise*, p. 6.

and, like obedient subjects, found the stars and reported—as if the observer, by going north, could better view the point of the summer solstice, and so of the rest!—and this fact is gravely recorded in the history of Chinese astronomy. From B. C. 2159 to B. C. 776, no mention is made of eclipses or of astronomy. In B. C. 687, mention is made of a night without clouds and without stars; towards midnight a shower of stars was seen to fall, which vanished as they approached the ether. The Chinese divided the circle into $365\frac{1}{4}$ degrees. They had nineteen rates for the precession of the equinoxes. Of the 460 eclipses recorded, only sixteen are verified, and not a dozen happened at the time as to year, month, and day designated. The first eclipse on the list is placed at B. C. 2159; but a part of the missionaries did not believe that the record relied on was designed to be that of an eclipse. Delambre did not believe the language designated an eclipse. Biot calculated the eclipse supposed to be intended, but found it could not have been visible in China.* In B. C. 164, the astronomer Tchang-Heng is said to have constructed armillary spheres, and a celestial globe and sphere, and to have made a catalogue of 2500 stars; but these are without latitude or declination.† It is said that their knowledge of astronomy was lost, when, in B. C. 213, the emperor Tsin-chi-hoang-ti caused all their books to be burned. M. Biot pretends that a few books on astronomy and astrology were preserved; but Prof. Weber thinks this fact—the destruction of the books—very damaging to Biot's theory of the antiquity of the *sieu*.

I mention these facts to show what was the character of the Chinese astronomical literature. And do they not prove that the astronomy of that people, down to the commencement of the Christian era, was vague, rude, and of an unscientific character, and that their records are not to be depended on? Not that the Chinese could not have originated the *sieu* system. This, at best, is only a bungling part of a bungling astronomical apparatus, a fit appendage to their rude astronomy. It is evidently Chinese in its origin.

In view of these facts, I cannot but think that Biot has much overestimated the character of the astronomy of the Chinese; and they afford ground for a strong suspicion that both he and the missionaries have, in important respects, misinterpreted the Chinese records, especially in regard to the antiquity of some of them, or that the Chinese themselves may have been guilty of forging and falsifying their records. And was there not an opportunity for this, when their astronomy was reformed in the second century of our era? And is there not evidence of this

* *Lettres Edifiantes*, Tome xxvi., p. 97.

† Delambre, *Ast. Anc.*, vol. i., p. 370.

manipulation of materials and records from the account of the labors of the astronomers under the dynasty of the Han, a little later!*

Again, in this connection, we may note the fact of there being indisputable evidence that the Chinese astronomy was modified under a western influence, through communications from India, Arabia, and Greece, during the first centuries of our era. The names of the ascending and descending nodes are clearly from India, and the same is true of the names of some of the months. Biot says that the Greek zodiac was introduced into China in the time of Antoninus (*Précis de l'Astron. Chinoise*). Mohammedans were introduced into their tribunal of mathematics in the fourteenth century of our era. How very natural it would have been for their astronomers, having learned that the Hindus and Arabians had a division of the circle of the heavens into twenty-eight parts, to make the number of their *sieu* to correspond, by addition or curtailment? And is there not evidence that this manipulation of the number twenty-eight did actually take place, from Biot's own account of the *sieu* system?

Since writing the above paragraph, my eye fell on the following sentence in Prof. Whitney's essay—the facts and principles stated seem to be derived from Biot's works—which in a striking manner confirms this suspicion which I have long entertained: "As regards the appearance of the *sieu* in the Shi-King and the Shu King, I am entirely of the opinion of Weber: that the mention in those works of stars or constellations which in part bear the same names with some of the defining-stars of the later system, and in part are identified with others of them by the commentators, does not in the least prove the subsistence of the system at the time; it only proves that the Chinese, industrious observers of the heavens as they seem to have been from a very early period, had already noticed and named some or all of the stars in the neighborhood of the ecliptic which are afterwards found to form a part of the series of the *sieu*." (p. 33.) Again: "The Chinese of a still earlier period, Biot would have us believe, had been in the habit of particularly observing the circumpolar stars, of noting their transits across the meridian, and of comparing therewith the transits of other stars. In the gradual improvement of their processes, they hit upon the plan of taking their fundamental stars nearer to the equator, for the sake of greater facility and accuracy of observation; but they were still so far under the dominion of their former method that they made choice of such new stars as were virtual representatives of the old ones, standing upon nearly the same circles of declination." (p. 36.) This, it is to be kept in mind, is Biot's theory.

* The Han came to the throne B.C. 206. They collected again, and, for the next part, from oral tradition, the remains of Chinese literature. (See Prof. Müller, *Rig Veda*, vol. iv., p. 211.)

Respecting it, Prof. Whitney remarks: "It is here, again, first to be noted that all this is pure hypothesis on the part of M. Biot, and not in the least founded upon any record or tradition in the Chinese literature. No Chinese author has been shown to attempt to give the time or the manner of the first establishment of the series of *sieu*, or to explain the motives of their selection."

It is of no importance, as bearing on our argument, to determine whether this criticism of Biot's theory by Prof. Whitney is well founded or not. It probably is well founded. But whether it is or not, it clearly results, both from the theory and the criticism upon it, that there is no evidence of the *sieu* in a well defined system of twenty-eight determinant stars till a late period—perhaps some centuries after Christ—but that there is evidence of their changing nature and indefinite character, especially in regard to the determinant stars themselves and their number. Now when these facts are viewed in connection with some other prominent facts in the history of Chinese astronomy—e. g. the destruction of books on astronomy, B. C. 213, the reformation of astronomy in the second century after Christ, the astronomers under the Han collecting the remains of Chinese literature, and "mostly from tradition," their adopting from the Hindus the names of the nodes of the moon's orbit, and some of the Hindu months, the introduction of the Greek zodiac in the time of the Antonines (Biot, but no matter when), Mohammedans occupying their tribunal of mathematics in the fourteenth century, and the Jesuit missionaries a century or two later having the control of this tribunal, assisted of course by Chinese astronomers—in view of all this, have we not ground for more than a suspicion that the number twenty-eight is not Chinese, but from India or Arabia?

In view of all these facts and considerations, I am clear in the conclusion that the *sieu* of the Chinese and the *nakshatras* of the Hindus had no genetic relation to each other, and, if either was modified by the other, the modification was in this respect—that the number twenty-eight in the former was derived from the latter.

Let us now turn to the only other people with whom it has been claimed that the lunar zodiac might have originated, the Arabians.* Here a brief space will suffice to set forth the principal facts from which we must draw our conclusions. And it is almost sufficient to inquire, Where were Arabic literature and science at the time the first of the Siddhântas of the Hindus were compiled, about A. D. 500? It is true Abulpharaj, in his "History of the Dynasties," speaks of the Arabs as given to the

* The evidences of a common origin of the *mantzil* with the *nakshatras* are so clear that I shall not discuss the points of coincidence and discrepancy between the two systems.

cultivation of letters, and even of astronomy, so far as to observe the rising and setting of the stars,* yet may it not be said that astronomy among the Arabs cannot date back to a period before the rise of the Mohammedan religion? Delambre, in his great work, the History of Astronomy, does not treat of the astronomy of the Arabs in his volumes on ancient astronomy, but in that on the astronomy of the middle ages. And the first author he mentions is Abougiāfar Almānsor, who lived in the eighth century after Christ. This author is said to have studied law, philosophy, and principally astronomy. His great-grandson, Abdallāh Almainoun, who reigned at Bagdad in A. D. 814, was farther advanced. He had a Persian preceptor, and sought for Hebrew, Syriac, and Greek books, and had them translated. The Syntaxis of Ptolemy was translated by Isaac ben Honain, in A. D. 817.

Again, we have clear historical proof that the Arabians received astronomical knowledge at this early period by direct communication from India. Thus Colebrooke, in the preface to his Hindu Algebra, states the following: "In the reign of the second Abbasside Khalif Almānsūr . . . (A. D. 773) as is related in the preface to the astronomical tables of Ben-Al-Adami, published . . . A. D. 920, an Indian astronomer, well versed in the science which he professed, visited the court of the Khalif, bringing with him tables of the equations of planets according to the mean motions, with observations relative to both lunar and solar eclipses, and the ascension of the signs; taken, as he affirmed, from tables computed by an Indian prince, whose name, as the Arabian author writes it, was PHIGAR." (Colebrooke's Hindu Alg., p. lxiv.) That the Arabians were thoroughly imbued with a knowledge of the Hindu astronomy before they became acquainted with that of the Greeks, is evident from their translation of Ptolemy's Syntaxis. It is known that this great work first became known in Europe through the Arabic version. In the Latin translation of this version, the ascending node (Gr. ἀναβιβάζων σόρδεσμο,) is called *nodus capitis*, 'node of the head,' and the descending node (Gr. καταβιβάζων σόρδεσμο,) *nodus caulae*, 'node of the tail'—which are from Hindu appellations. (See Latin translation of the Almageste, B. iv., ch. 4; B. vi., ch. 7, et al.)

Another fact showing the belief of the Arabians themselves respecting their indebtedness, in matters of science, to the Hindus, should be mentioned. They ascribe the invention of the numerals, the nine digits, as they are called (the credit of whose invention is quite generally awarded to the Arabians), to the Hindus. "All the Arabic and Persian books of arithmetic ascribe the invention [of the numerals] to the Indians." (Strachey,

* Delambre, Ast. du Moyen Age, p. 1.

on the early History of Algebra, As. Res., vol. xii., p. 184; see likewise Colebrooke's Hindu Algebra, pp. lii.-liii., where the same is shown from different authority. Strachey's article was published previously to that of Colebrooke.)

We cannot, however, date the first knowledge of the lunar mansions—the *manāzil*—among the Arabians at the time of the visit of the Hindu astronomer to the Khalif Almansūr, A. D. 773, as stated by Colebrooke (see above), for they are mentioned in the Koran,* and Prof. Müller says the Bedouins had observed them long before the time of Mohammed.† On what authority he rests this last assertion, he does not inform us, or, if he has stated it, the statement has not fallen under my notice. But we may take such a fact, with a good degree of confidence, on his authority. And yet, it is so often the case that general indefinite declarations in regard to important facts, or supposed facts, are, on insufficient grounds, made by learned men, and obtain a current reception in literature, that I cannot but entertain grave suspicions in regard to them when the authority is not given, so that I can subject it to a thorough examination. And I really suspect that the words "long before" would be found, on strict scrutiny, not to be applicable to the real facts in the case. But, admitting the statement as correct, those who make it would not have the words cover a period of more than two, three, or four hundred years; so that, even on this admission, we have the well established fact, that the *nakshatra* system was known in India at least from twelve to fifteen hundred years before the *manāzil* were known among the Arabians.‡

We must, therefore, conclude with confidence, that the theory of the Arabian origin of the lunar zodiac, represented by the *nakshatras*, must be given up, there being absolutely no evidence in its favor.

But did not this system originate with some other Semitic people, from whom the Arabians received it? Such a supposition has been suggested as plausible. I dismiss this point by merely saying, when facts entitled to be regarded as evidence of such an origin shall have been produced, I shall be willing to give them their due weight. But at present, I know of no facts that afford any plausibility to the supposition. This division of the zodiac was known in India, or to the Sanskrit-speaking people on the confines of India, at least twelve centuries before Christ, and I am not aware of any evidence that can afford the ground of a suspicion that any Semitic people had a knowledge of the system till nearly or quite fifteen hundred years later.

* Koran, x. 5; xxxvi. 39. See Müller, *Rig-Veda*, vol. iv., p. lxix.

† Ib.

‡ Some three or four centuries must be deducted from this, if we admit the indefiniteness claimed by Prof. Whitney in regard to the Jyotisha record. See above, p. 317.

That Prof. Weber should adduce the fact of the occurrence of the words *mazzaloth* and *mazzaroth* in the Hebrew Bible (Job, xxxviii. 32, and 2 Kings, xxiii. 5) as the Hebrew equivalent of the Arabic *mandzil*, and base upon it an argument for the origin of the lunar division of the zodiac in western Asia, very much weakens my confidence in him as authority or guide in such a discussion.* For the connection of the words named with *mandzil* is far from being certain; their meaning, according to lexicons and versions, is different; and if the supposed identity could be made out, the fact would prove nothing to the point, unless there were some evidence that their application is the same; and such evidence, so far as I am aware, is entirely wanting.

But did not this division of the zodiac originate in some central point, with some other people, from whom it was communicated to both the Indians and Arabians? Such a supposition has often been suggested. It is mentioned probably more than half a score of times by Prof. Whitney in his rather voluminous writings on this subject; it is likewise suggested by Prof. Weber.

Prof. Whitney, in stating what are the true grounds for suspecting that India received her system of *nakshatras* from abroad, says that "by far the strongest of them is the appearance of the same system in the possession of so many other Asiatic nations, and in the case of the Chinese, at least, from so early a period. That the hypothesis of the origination in India is positively excluded by these facts I would by no means claim: I only assert that they are much more readily explainable by supposing that the institution was first invented and applied at a central point like Chaldea, the seat of empire, commerce, and culture which are known to have had wide-reaching connections and influence in every direction." (Essay, p. 66.)

In support of this "suspicion," Prof. Whitney mentions three or four reasons: as that Hindu propagandism began, so far as we know, with Buddhism; the Arab and Chinese systems seem to be at several points in nearer agreement with the presumable original; the Hindus were not a practical people, "not of such habits of mind that we should expect to see arise among them an institution like the lunar zodiac, of so practical a bearing, founded upon faithful and long continued observations of the heavenly bodies, and intended for chronometrical uses;"† their

* See Prof. Whitney's essay "on the Views of Biot and Weber," p. 62. According to Prof. Whitney, Weber "mainly based his earlier rejection of Biot's views" on the occurrence of the words named in Hebrew.

† I thank Prof. Whitney for this characterization of the *nakshatra* system, and ask him in connection with it to keep in mind his own admission, and the admission of all Sanskrit scholars, that the existence of the system in India is traceable back to the Vedic period proper, and that almost "from the time of its first employment it shows no signs of change." (Essay, p. 67.)

failure to notice the lesser planets till the time they felt the influence of the Greek astronomy—implying that their first knowledge of these bodies was from the Greeks; and their having no instruments, all their observations of the heavens being by the unassisted eye.

I have not space for any adequate notice of these arguments and speculations. I merely remark that what I have said above in regard to the connection of the *nakshatras* and *sieu* is sufficient for that point. As to the practicalness of the Hindu people, were they not equal to, if not before, other nations of antiquity, especially in regard to astronomy, even admitting Prof. Whitney's claim of indefiniteness in regard to the date of the Jyotisha record? As to the Chaldean origin of the system, I ask for evidence: did not the Chaldean astronomy almost bodily, certainly the essential parts of it, pass over to the Greeks? and if the *nakshatra* system originated with the Chaldeans, or if they knew of it, is it not absolutely inexplicable that no traces are found of it in Grecian or Egyptian literature? That the Hindus did not notice the lesser planets till they received a knowledge of them from the Greeks, I simply do not believe; Bentley supposed he proved the planets were discovered in India in the fifteenth century B.C., and Prof. Müller endorses his argument and takes his facts; though I doubt the conclusiveness of Bentley's reasoning, the conditions of the problem are such that it cannot be satisfactorily disposed of by assumption, or a single declaration in a rounded period.

But the assertion that the Hindus, in the early period of their astronomical culture, had no instruments, and the use made of this assumption in the argument, I cannot let pass without more notice.* Prof. Whitney says:

"We have no reason whatever to believe that the Hindus who first employed the *nakshatras* possessed instruments, and

* Prof. Whitney attaches great importance, likewise, to the assumed want of instruments among the Hindus, in his essay "on the Jyotisha observation of the place of the colures, and the date derivable from it," published in the Journal of the Royal Asiatic Society of Great Britain and Ireland. In fact, the validity of almost all he says in his attempt to prove the indefiniteness of that date, and its worthlessness for any chronological purposes, depends on the assumed fact that the Hindus had no instruments. I must quote two or three sentences: "The ancient astronomy of India was, evidently, of a very rude character. It had neither the instruments nor the theoretical system of division of the circle necessarily implied by exact measurements. It knew no lesser parts of the ecliptic than the twenty-sevenths, or 'portions' of the asterisms. Its observations were only such as could be made with the unassisted eye." (p. 322.) And then, as an inference from this assumption—as I term it—on the next page, he says: "If the Hindus themselves, in the ancient period, made an observation on the place of the colures which would have been an accurate one in the year 1860 B. C., no one should venture to draw from it any more precise conclusion than that it was probably made somewhere between 1800 and 1000 B. C." See other quotations and notices in reference to this point, above, in note on p. 817; and likewise below.

had elaborated a system of observation of the heavens; their studies, beyond all question, were made with the eye alone." (E-say, p. 25.) And again, on the same page, speaking of the *nakshatras*, he says: "They were . . . a series of twenty-seven or twenty eight stellar groups, serving as basis for a division of the ecliptic into the same number of portions, as nearly equal as the unassisted eye could measure them;" and again, on p. 27, "that under them [the *nakshatras*] the planetary path was regarded as subdivided into twenty-seven equal portions, yet by the eye alone, and without any of that precision and fixedness which are given by the habit of observing with astronomical instruments."

In reference to this language, I ask, with all soberness and due deference, what have we in it but pure gratuitous assumption? How does Prof. Whitney know that the Hindus had no instruments even as early as the time their system of twenty-seven asterisms was invented? In the sentence which follows the words I last quoted, he says, "that when, finally, a few and more exact astronomy was brought in from the West, a selection was made of one star in each group, to represent the group in the calculation of conjunction, and hence to be called its junction-star; and that the time at which this definition was made . . . must have been not far from A. D. 500." This date for the definition of the junction-stars of the *nakshatras* is undoubtedly correct, or nearly so, but the implication is that this was done under an influence from abroad—from Greece, as we must infer from other passages—and that till that time the Hindus were without astronomical instruments. It is to this implication, with the preceding direct assertion, that I object. It appears to me to be assumption without proper grounds. I of course cannot prove by documentary evidence that the Hindus had astronomical instruments at an early period in their astronomical studies, yet I cannot but think that there is as much in favor of such a supposition as there is against it. If the assumption that they had not instruments is granted, it certainly constitutes a powerful argument in favor of the non-originality in India of the *nakshatra* system—it is even an argument against the originality of any valuable part of the Hindu astronomy. But I do not admit it. For all the reasons that have been shown, we might, with equal plausibility, advance the opposite assumption, and say that the Hindus evidently had astronomical instruments at a very early period. This is to be inferred from the early knowledge and use among them of the lunar zodiac. This zodiac contemplates a division of the circle of the heavens into twenty-seven equal portions, each consisting of thirteen and one third degrees. This division could not have been made without an instrument; and then, again, it is evident that the

practical value and use of this zodiac must depend on an instrument to aid the eye to mark the divisions, and we have evidence of the use of instruments in the early recorded observations: e. g. the place of the equinox was marked when it was at a point nearly 27° to the east of the commencement of the modern Hindu sphere; and in the first part of the twelfth century B. C., as is recorded in the Jyotishas attached to the Vedas, the southern solstice was observed to be in the beginning of the asterism Dhanishthâ, and the northern in the middle of Âçleshâ. This implies the knowledge and use of an instrument appropriate for such observations. In fact, we can scarcely conceive of their making any practical use of their zodiac—to say nothing of its invention—and of their accomplishing what it appears from their records they did accomplish, without instruments. The regulation of the sacrifices prescribed in the Vedas required a calendar, to establish which, with an accuracy necessary for practical use, required a knowledge of some instruments.*

I say, one might put forth, in such language, the theory or supposition that the Hindus had astronomical instruments from the commencement of their astronomical studies, and he would not be guilty of more groundless assumption than is involved in the opposite, which is asserted by Prof. Whitney.†

As I began the criticism on this point, I had in mind only the idea of making a humble protest against putting forth what I esteem a gratuitous assumption, and then basing upon it an important argument in reference to a great historical fact. But the more I reflect on the point, the more I am inclined to think that the supposition I have made as an offset to the opposite one made by Prof. Whitney is of some real positive value—is of value, because it has some real ground of support. For, in the first place, what implausibility is there in the supposition that, at the time the lunar zodiac was first known in India, there was a knowledge and use of appropriate instruments for its elaboration and application? Why may not an armillary sphere, somewhat like the instrument described in the modern Siddhântas,

* I learn from a remark of Prof. Whitney in his essay on the Jyotisha observation, before alluded to, that Dr. Haug, Superintendent of Sanskrit Studies in the Poona College, maintains the idea here advanced, that of an approximately accurate observation, in the preface to his translation of the Aitareya Brâhmana.

† In regard to this point, it is not unimportant to remark, that the modern system of astronomy represented in the Siddhântas, compiled about A. D. 500, as all admit, is evidently a result of centuries of preceding culture. The Sârya Siddhânta, for example, is evidently the embodiment of astronomical facts and principles which required centuries for their discovery and application. A number of names of eminent astronomers are mentioned in modern Hindu works. The Brahmanas have a tradition that their books were extensively destroyed about the time named. This helps to account for the fact that we have no more astronomical notices preceding the compilation of the modern systems.

have been known even at that early day? Is it said that human art and ingenuity had not been at that time sufficiently developed for the invention of such an instrument? But can such an assertion be maintained? Was there not, before the flood, a Tubal Cain, who was an instructor of artificers in brass and iron? Did not Noah build the ark, which in some points has been a model in naval architecture to all subsequent times? Are there not ancient monuments in several countries which afford signs of a highly cultivated art in pre-historic times? And are there not on these monuments indications, yea proofs, of art-skill which we boasting moderns have never been able to surpass nor even equal? And why may there not have arisen some Hindu Hipparchus even as early as the fifteenth century B.C., who could invent an armillary sphere, and use it in constructing the lunar zodiac which seems to date from that early period? Surely the amount of ingenuity for inventing, and skill for making the instrument, is not so great as to preclude such a supposition. And after all, is it not a natural assumption that the mind which could conceive the lunar zodiac, represented in the *nakshatra* system, must, as a matter of course, have conceived of some apparatus like the armillary sphere to explain it and illustrate its use? Was not the construction of such a sphere a natural, if not necessary, consequence of the conception of its celestial prototype?

But, lest I should be misrepresented, and accused of putting forth groundless assumptions and then basing upon them important arguments, I will state distinctly the results which I wish to have regarded as established by my remarks in relation to this point—the knowledge and use of instruments for astronomical discovery and culture in early periods of Hindu history. And first, the assumption that they had such instruments is not more groundless than the opposite one, that they had none; second, there is no implausibility in the supposition that they had astronomical instruments in early times; and third, the character of their astronomical records, the nature of the facts recorded, and general considerations necessarily connected with such an amount of astronomical knowledge and culture as they evidently possessed, render the supposition that they had appropriate instruments not only plausible but in a high degree probable. And the argumentative value I would have attached to these conclusions—respecting a knowledge of the planets and the use of instruments in India in early times—is simply this: they are fully an adequate offset to much that has been written by those whose views are somewhat opposed to the opinions which I hold in reference to Hindu astronomy; and, if the writings of these learned men may be taken, in regard to matter and style of argumentation, as a standard for the manner of treating the

subject, these considerations are necessary in order to give a proper view of the matters under discussion. They are necessary, not only to place in proper light possible and plausible suppositions in relation to the subject, but likewise to do justice to the Hindus in regard to their abilities and actual achievements in the science of astronomy. I have no high idea of the Hindu astronomy, or of the practicalness of the Hindu mind; but I would have justice done them, out of a mere regard to the value of historical accuracy.

The result of my investigation, in my own mind, in relation to our subject, is this: From the evidences and materials for judging now available, we must conclude that the lunar zodiac represented in the *nakshatras* and *manāzil* originated with the Hindus or their immediate ancestry. The *sieu* of the Chinese have no genetical relation to them.

I say, from present evidence, for I hold my mind in an attitude to receive any additional light or evidence on the subject. But I look with incredulity, rather than expectation, for any important addition to our present materials for judging. For whence are such additional materials to be derived? Have not half a score of learned societies, under the titles of Asiatic, Oriental, Antiquarian, and Literary—Continental, British, and American—embracing all the antiquarian talent and interest of the age, been in this field of research for from an eighth to three-fourths of a century and more? And have they not in this time ransacked the whole extant literature of the world? Is there a monastery or nunnery or monk's cell, from the pillars of Hercules to the Caspian, which has not been explored and made to yield up its contents? Has not the literature of the Hindus been thoroughly examined, and the most valuable portions translated into European languages? And now, I ask, whence is this expected additional evidence to come? May we not say that, since the Vedas of the Hindus, the epic poems, and other ancient literature of these people, and especially the Siddhāntas, have been thoroughly examined, and the principal and most important parts translated—other ancient literature having been subjected to nearly the same thorough research—inay we not, in these circumstances, say that we have all the materials for judging the question of the origin of the lunar zodiac that we can ever expect to have? And when these materials are properly estimated, does not the evidence preponderate most overwhelmingly in favor of the Hindu origin of this appendage to astronomical science? I must say for myself, that, with this light, I cannot entertain even a suspicion of any other origin. And I look for important evidence of another origin with about the same hope and expectation as I do for the discovery of some new race, whose literature will modify essentially the present received his-

tory of any ancient people. If there is extant any undiscovered historical work of some Arabian, Teutonic, or Iranian Herodotus, let it be sought out, and we will hail it with joy, and permit it to modify our present opinions; and so, if there is any additional evidence in regard to the origin and history of the lunar zodiac, let it be produced, and we will give it its proper value; but until some additional evidence is brought forward, I must ascribe the origin of the lunar zodiac to the Hindus.

ARTICLE VIII.

ON LEPSIUS'S STANDARD ALPHABET:

A LETTER OF EXPLANATIONS FROM PROF. LEPSIUS,

WITH NOTES BY W. D. WHITNEY.

Presented to the Society May 18th, 1864.

[THE seventh volume of the Society's Journal contains (pp. 299-332) a somewhat detailed analysis and criticism of the first edition of Prof. Lepsius's Standard Alphabet (Berlin and London, 1855), by Prof. Whitney. In reply, the distinguished proposer of the alphabet, on occasion of the publication of a second edition of his work (1863), addressed a letter of explanations to Prof. Whitney, and expressed his desire that it, or the substance of it, should be brought before the Society and published, as the criticism itself had been. It was accordingly presented at the Society's next meeting by Prof. Whitney, along with verbal comments of his own, which he has now, by request, written out to accompany it.—COMM. OF PUBL.]

..... Upon reviewing the more general characteristics of the proposed "Standard Alphabet," and the special modes of representation and selected signs to which your approval is expressly given, I perceive that there remain, in fact, only a few exceptional cases, in regard to which we have still to come to an understanding. You hold, as was to be expected, to the Italian and German value of the vowel-signs, which has not become altogether unknown even in English orthography. You accept, with us, as sign of a long vowel the horizontal mark above the letter, instead of the circumflex accent, and, as sign of a short vowel, the crescent line (˘). It is of more consequence, that you also favor the Greek circumflex (ˆ) over the vowel as sign of nasality, instead of the appended *n* with a diacritic point, as has hitherto been more usual, to the total misapprehension of the true quality of the nasalized vowel. Further, you retain the acute (´) as sign of accent, while it has not seldom been misemployed to indicate the long quantity of a vowel. Also, you regard the double dots with *o* and *u* as the best mode of marking the sounds of German *ö* and *ü*, but are disposed to question whether they might not also be placed, as

in German, over the vowel.¹ The chief obstacle to this method comes from the Tataric languages, in which both vowels are common, and often have to be provided both with the sign of long quantity and with that of accent, which would cause a too great accumulation of signs above the vowel (\ddot{u} , \acute{u}): in such cases, of course, the dot above the i is left off. Besides, in writing and printing, the double ii and the \ddot{u} are often hard to tell apart, and this might easily make trouble in foreign languages.

I must add a remark to what you say on pages 309 and 331 respecting the vowel of the English *but*, and respecting the so-called "neutral vowel," which you would rather write ə than e . Here you seem to me to treat two different vowels as one. The former, in *but*, *son*, *does*, is a clear vowel, like all the others, and lies in our system precisely between a and ə (Standard Alphabet, 2d ed., p. 50). The latter is produced by the unarticulated resonance of the vocal chords, which, even when the mouth is closed, may be made audible through the nose, or through both passages together, and is found in all languages, chiefly in unaccented syllables—the same which, in the Sanskrit and other languages, when combined with r and l , turns them into vowels, and can also enter into combination in such a way with all sonant fricatives as to confer upon them vocalic value in forming syllables. In English it is always without accent, as the o in *nation*, the a in *beggar*, the second e in *velvet*. If we provisionally write the vowel of *but* with the sign ə , then the closely kindred vowels ō , ē , ē are easily to be distinguished in *puns*, *pence*, *threepence*, or in *but*, *wet*, *carpet*.² Since, however, it is not our spe-

¹ The suggestion to which reference is here made did not imply any serious dissent from Prof. Lepsius's opinion touching the representation of these sounds, but was only to the effect that, for convenience's sake, the letters dotted above might not be wholly disallowed. The principle that the diacritical marks should be placed below the letters, in order to leave room above them for the designation of more accidental qualities, is evidently to be accepted as sound and valuable.

² Here, I cannot forbear insisting upon the correctness of my own view, and claiming that Prof. Lepsius—so far as concerns English orthoepy—is endeavoring to separate into two sounds what in fact is only one. The neutral vowel, in my apprehension, is that utterance of intonated breath through the mouth upon which the shaping organs of the mouth are prevented from exerting any voluntary influence, in the production of which they remain quiescent and idle, as in the natural process of breathing. Hence the appositeness of its appellation. In a (of *far*) there is equally an absence of shaping agency on the part of the mouth organs; only here, instead of being lazily left in the way, to dim the utterance, they are consciously got out of the way, by the full opening of the mouth. Hence a and the neutral vowel are nearest of

cial object to transliterate the English, and since the series in the vowel-pyramid (St. Alph., 2d ed., p. 52) which stands nearest to *a* is not developed in any other language, so far as I know, as clearly and consciously distinct from the next following series, I have regarded it as proper to indicate the single sounds of the

kindred; the latter is the dimmed or indistinct counterpart of the former; it is well entitled by the Hindu grammarians "the covered-up (*samvṛta*) *a*." I greatly question whether it is proper to call it "unarticulated," as is done by Prof. Lepsius; but this is a verbal question, which need not delay us now. The same uncharacterized utterance of intonated breath not only *may* enter into combination with all sonant fricatives, but there can be no such thing as a sonant fricative without it. It does not by its presence turn *r* and *l* in Sanskrit into vowels, because it is necessarily inherent in the *r* and *l*, whether they be consonants or vowels. It constitutes, now, a striking peculiarity of our English vowel-system—one accordant with the dimming which so many of our open vowel-sounds have been made to undergo, and with the general reduction of the vowels in our unaccented syllables to insignificance and indistinctness—that, in a host of words, even the accented vowel has lost its distinctive quality, and sunk to the condition of the neutral. The vowel-sound in *but*, *son*, *blood*, *touch*, *does* is absolutely the samewith that in the final syllables of *nation*, *pilfer*, *ocean*, *nadir*, *zephyr*. (Prof. Lepsius treats *carpet* and *velvet* as belonging in the same category with these latter words; but he is in error: the *e* of their final syllables has its ordinary short sound; there is no difference except of accent between the *vel* and the *vet* of *velvet*.) The *o* of *son* differs from that of *nation* only as the *a* of *tact* differs from that of *contact*, the *e* of *vet* from that of *carpet*, the *u* of *full* from that of *fearful*. In this view, I am sure, I shall be supported by the very great majority of those to whom the English language is native.

Nor am I able to perceive that there is any especially close kindred between the vowel-sound in *but* and *puns* and that in *wet* and *pence*, as would seem to be inferrible from Prof. Lepsius's chosen examples. *But* and *vel* are no nearer than *but* and *fat*, or *but* and *hot*, or *but* and *put*, or *but* and *fit*.

I should hardly be willing to allow any place at all in the vowel-pyramid to the neutral vowel, the sound of *u* in *but* etc. Its more proper position would seem to be outside, in the other direction from the apex *a*, since it differs from this sound by another sort of difference than that which characterizes the other vowel-sounds. We place *u* between *i* and *e* because in its utterance are combined the characteristic positions of those two vowels; we place *o* between *e* and *o* for a like reason. But I cannot see that the *u* of *but* sustains any such relation to the *a* of *at* and the *a* of *all*, or to any other pair of vowels in the system. It is most nearly related to the *o*-sounds (German *o*, French *eu*), but the reason is, I think, that these latter, by their combination of the medial labial position of *o* with the medial linguo-palatal position of *e*, approximate pretty nearly to that general condition of quiescence of the mouth-organs in which the neutral vowel is produced.

English series, even where they sporadically show themselves also in other languages (as in Mordwin, etc.), with the signs of the next following series, and, accordingly, not to distinguish the two series. For this principle, also—namely, to observe moderation in the distinction of sounds—I have your express approbation (pp. 309, 329). The sound *q*, too, which is so clearly distinguished in French (*beurre, heurter, un*) from *o* (*feu, jeune*), I have found developed along with the latter in no other language outside of Europe; in German, where *o* is only long, *q* only short, the sign *q* would be sufficient for both. But in no case is the sound *q* an invention of mine, made for the sake of theoretic completeness. If, again, you look upon my distinction of *e* and *e*, along with *e*, and of *o* and *o*, along with *o*, as unfounded or dubious, your view rests, as I think, only upon a misunderstanding of my employment of these signs. The distinction of the open and of the close long *ē* (*ē* and *ē*) is not developed in the English language, which possesses only *ē*; only, among its short vowels, it has *ā*, in *hat, fancy*, along with *ē*, in *men, send*, which last appears to be somewhat nearer to *ā*, if compared with the German *ē*, in *Männer, senden*. It is true that the short vowels *ē* and *ē* are hard to distinguish; but in southern Germany, in the Swabian dialect, even these are regularly held apart; every one speaks *felt* with *ē*, and *Bell* with *ē*, *bellen* with *ē*, and *Stelle* with *ē*. But, when of long quantity, *ē* and *ē* are sharply distinguished in French, German, and numerous other languages, in and out of Europe; as also (though not in German), *ō* and *ō*.³ In obedience, however, to our rule (p. 79),

³ I fully acknowledge the greatly superior authority of Prof. Lepsius in reference to such details as are here treated of, and do not venture to criticize or question his statements, except when they concern our own English sounds; here, I feel that a native utterance which is fully self-conscious confers an equal or paramount right. As a rule, all the English long vowels differ from the corresponding short ones by being of somewhat closer position, and there may doubtless be this difference also between the *e* of *met* and the initial sound of the *e* of *they*, so that, in Prof. Lepsius's system, the latter would be more exactly written with *ē*, the former with *ē*. But, as is well known to English phonologists, and pointed out in many of the works on the subject, our English "long *a*" (the *e* of *they* etc.) is not a simple vowel-sound, but a slide: it begins with *e* and runs down to *i*, just as our "long *o*" begins with *o* and runs down to *u*: each has, as it is often termed, a "vanishing sound," the one of *i* (*ee*), the other of *u* (*oo*); this Prof. Lepsius leaves out of sight. To my ear—as, I presume, to other English ears—there is a more noticeable difference of quality between the *i* of *hit* and the *i* of *pique*, or between the *ū* of *full* and the *ū* of *fool*, than between the opener and closer *e* in either French or German. But Prof.

to avoid as much as possible unnecessary diacritical signs, we write, in every language, either only *e*, *ə*, or only *e*, *ə*, since their distinction is obvious; and farther, we write with diacritical sign that one of the two sounds which occurs least frequently; the other we leave without sign (as plain *e*, *ə*)—unless, indeed, there should be special reasons for employing marks of distinction in both cases. Hence, in Ossetic (p. 138), we oppose *e* (for *ē*) and *ə*; and in Lithuanian, *e* and *ə* (for *ę*). Where the distinction is not developed at all, only the neutral *e*, of course, calls for use, whether the sound actually lies between *e* and *ə*, or approaches more nearly to one or the other of them.⁴ It is of importance, at all events, that you expressly (p. 306) give your assent to the use of the subterposed line and point for indicating the open and the close sounds respectively; and after the above explanation respecting the shifting application of these signs, I think that I may feel certain of your assent with respect to this point also. The same exposition furnishes an answer, too, to your remark (p. 310) respecting *oi* (for *oi*) in English *join*, and *ē* (for *ē*) in French *bien*, since there is not, in the former language, any *oi* along with *oi*, nor, in the latter, any *ē* along with *ē*.⁵

You take especial exception to my comparison of the vowels

Lepsius passes over these differences as unessential; nor should I think of setting the English vowels referred to on different steps of the vowel-pyramid. But neither should I, if an intermediate step is to be established between *e* and *a*, think of occupying it with the French or German opener *e*, which Prof. Lepsius writes with *e*. This belongs on the same step with *ɛ*, as being but a slightly varied form of the latter; the independent position must be reserved for the English *a* in *fat*, which is a true medial between *a* and *e*, as is the *a* of *all* between *a* and *o*.

I propose to give, in an additional note, a brief systematic view of the English vowel-sounds.

⁴ This principle of Prof. Lepsius's system—namely, to leave the normal and usual vowel of each language unencumbered by diacritical points, introducing these only according to the inner needs of the language itself—must command general and hearty approval.

⁵ The difficulty suggested by Prof. Lepsius's usage as to the points here referred to is not wholly removed by his explanation. If, in writing the simple sounds, we are to distinguish the *o* of *old* and the *o* of *or* carefully by appropriate signs, why, when the latter occurs in diphthongal combination, shall we represent it by the sign of the former? If the vowel-sound nasalized by the French in *lin* is much more nearly akin with the *a* of *malade* than with the *i* of *ligne*, why write it with the sign of the latter? The question here is not one regarding the introduction of new signs, which would otherwise be unnecessary; it concerns the consistent application of those which are actually adopted and used: and, without this, no phonetic system of transcription can be approved.

with the colors. I give up this comparison (which is found in the new edition also, at p. 46) wholly to your criticism. It has no real concrete value, and I have made no manner of application of it. It appeared to me, however, quite well calculated to make clear to the reader why I abandoned the earlier universally accepted and altogether confusing arrangement of the vowels in a single series, with which even the physiologists were wont formerly to vex themselves, and adopted in its stead a new pyramidal arrangement, which, though less agreeable to the eye, is very important for the understanding. The simple and very apposite analogy of the triangle of colors saved me any further explanation of my arrangement, with those readers who were not so familiar with its physiological foundation as I myself could not but be.⁶ I know, too, very well where the comparison is defective, as appears plainly from my arrangement of the vowels in those languages which show the harmonic sequence of vowels. So much by way of explanation, and in order to free myself from the reproach of a fanciful theory, which is so abhorrent to me that I should be sorry to bear even the appearance of it. At present, the triangular arrangement has become usual. You yourself employ it, and you even extend the legs of the triangle into the system of consonants. The complete separation of vowels and consonants seems to you unnecessary and not strictly justifiable. A statement of the reasons on account of which I cannot agree with you in this, as well from a theoretical as a practical point of view, would here lead me too far,⁷ as I only wish now to call up the points bearing upon the transcription of the sounds, in which we agree or still differ, or in which I think that I note a misapprehension of my view, admitting of ready removal.

On page 311, you find my explanation unsatisfactory, when I

⁶ The regrettable effect of Prof. Lepsius's introduction of the comparison between the vowels and the colors lay, to my apprehension, chiefly in its seemingly implied denial of any real substantial ground for his arrangement of the vowels. The natural inquiry was: If there is a physiological reason for the vowel-pyramid, why is it not given us instead of this? And the triangle of colors, it is to be presumed, was hardly, if at all, more familiar to our author's readers than that which it was brought in to illustrate. It is much to be regretted that our expostulation, or that of some one else, did not reach Prof. Lepsius in time to prevent its insertion in his second edition.

⁷ I am very sorry that Prof. Lepsius abstains from any exposition of his views upon this point, the most interesting and important one of a theoretical character, it seems to me, among those discussed in my previous essay. I propose to devote a second additional note to a more thorough and detailed examination of the question.

say that *r* and *l* "are formed by a contact which is vibrating in *r*, and partial in *l*:" since, you maintain, the English *r* does not always vibrate, and "partial contact" is unintelligible. Now, in the English *r*, the vibration in many cases is in fact almost wholly lost, but it is only worn down from a former condition of distinctness, and some slight remnant of it is still left, else one would be compelled to say that *r* had passed over into another sound: the state of the case is the same as in regard to the French "*l mouillé*," which has become almost precisely *y*. Vibration remains still the characteristic sign of a well-marked *r*." The "partial contact" of *l*, on the other hand, I understand

* This is, in one aspect, a merely verbal question, as to whether a sound formed in a certain way shall or shall not be styled an *r*; yet it also involves a real one—namely, what constitutes the essential character of an *r*.

That a definition of *r* which takes note only of a vibratory quality in it, without specifying the organ which vibrates and the part of the mouth where the vibration takes place, is an imperfect and unsatisfactory one, must, certainly, be granted by everybody. In order that we may understand what such a sound is, we must at least be told that it is produced between the tip of the tongue and the roof of the mouth, as is actually the case. To me, now, this description of its place and organ of production (its *sthāna* and *karana*, as the Hindu grammarians would say) constitutes its true definition; the vibration is a common, even a usual, accessory circumstance; but it may also fail without impairing the essential quality of the sound, or taking away its right to be deemed an *r*. The comparison which Prof. Lepsius makes with the French *l mouillé* does not hold good throughout. The fundamental characteristic of an *l* is that, in its utterance, the intoned breath is expelled at the side of the tongue, which is in contact with the roof of the mouth at its middle: so long as this condition is fulfilled, so long as there is closure at the point and exit at the sides of the tongue, so long is the sound produced an *l*, and nothing else—whether the tip of the tongue be far retracted in the mouth, to the "cerebral" position, so as to form the "cerebral *l*" of the Vedic dialect of Sanskrit, or whether the whole tongue be drawn back into the position of palatal contact, so as to produce a palatal *l*, the true *l mouillé*. As soon, however, as the central contact in this last *l* is broken, and the breath escapes over the middle of the tongue, the *l* is lost, and the *y* takes its place, as is in fact the case in the latest style of French pronunciation. There has been a substitution of one sound for another. But nothing of this kind is true of the *r*. When, in its pronunciation, the tip of the tongue is directed forward, near the teeth, a vigorous articulation readily and naturally sets the organ in vibration, and such vibration is, perhaps, in the great majority of cases, an accompaniment of the utterance of this letter. But the vibration may be wholly eliminated, even during utterance in the position described, and yet the sound will continue to be so palpably of the same quality that no one would think of calling it any-

in this way, that the tip of the tongue is in contact, and that, at the same time, its sides are not in contact, but permit the exit of the breath, as in semivowels and fricatives: consequently, *l* is only partially explosive; the other part is semi-vocalic, or, as in the Welsh *ll*, fricative.*

thing but an *r*. The production of this untrilled *r* may be carried as far back in the mouth as we choose, but, though it will change its tone a little, as does the *l* in a similar case, it will continue to be an unmistakable *r*; and no one, that I am aware, has ever attempted to give it any other name. We sometimes hear persons who have a constitutional inability to utter an *r*, and substitute for it a *w*; but it would be very unjust, I think, to deny to those individuals and communities who do not trill the *r* the credit of pronouncing it at all. The vibration depends partly upon the force of utterance, partly upon the point on the roof of the mouth where the sound is produced. If the tip of the tongue be brought fairly back within the dome of the palate, vibration is impossible. This is the position in which the ordinary English *r* is uttered; and the same, as we have good reason to believe, was the case with the Sanskrit *r*. Its classification by the Hindu grammarians along with the other "cerebral" letters, its evident relationship with them as shown by its euphonic effects, and the absence of any notice of the peculiar quality of vibration as belonging to it, are quite conclusive upon the point. Unless, then, we are ready to deny to the Sanskrit as well as to the English the possession of an *r*, we must not set up vibration as the fundamental and essential characteristic of that letter.

As regards the trilling of the *r*, the differences of usage are not only national, but local, individual; they even depend upon circumstances affecting the style of utterance of the same speaker. The French triß with notably greater force and distinctness than do the Germans; a vibration is hardly to be accounted as the invariable accompaniment of this letter in a good German pronunciation, although it must be more distinctly spoken in German than in ordinary English. Among the English-speaking community, the Hibernians are most renowned for the rich roll they give their *r*; but the same is also a frequently remarked characteristic of individuals, and is often heard in public speaking, when great distinctness is aimed at, or the orotund quality affected.

I should define the *r*, then, as the sonant uttered between the tip of the tongue and the roof of the mouth, at the degree of opening next greater than that by which the sibilants are produced; and the vibration as its accidental, though usual, accompaniment, a characteristic of only secondary value.

* Prof. Lepsius has here given a definition of the *l* to which I should not have thought of taking exception; and he had already done so elsewhere, as was remarked in a note to my former essay (p. 312). It is to be regretted that he has not taken the trouble to do the same thing in his account of the Standard Alphabet, since the expression "partial contact" is so indefinite and ambiguous as not to be understood without explanation.

At page 313, you disapprove of my designation of "strong" and "soft" consonants, and are willing to admit only such appellations as "intonated and unintonated," or "vocal and aspirate," or "sonant and surd." That I was not perfectly clear as to what I myself would wish to express by these designations, I may now, doubtless, safely deny; since, in your note (on p. 315), you yourself cite my essay on the sounds of the Arabic alphabet, where I have set forth my view respecting the physiological processes in more detail. Until that time, as it seems to me, no one had yet given a precise definition of what characterizes the *tenuis* (as it is pronounced quite regularly in central Germany, in Hungary, etc., and was without doubt also pronounced in Sanskrit), in contradistinction from the *aspirata* (which must not be confounded with the fricative), and from the *media*.¹⁰ You enter, in your note, only into the distinction of sonant and surd, without separating *tenuis* and *aspirata*. Respecting that distinction, so far as I can see, we are altogether agreed. • I, like yourself, regard the intonation as the "primary

¹⁰ The wholly new and very peculiar views expressed by Prof. Lepsius in the paper in question respecting the distinction of *tenuis* and *aspirata* have not yet, so far as I am aware, met the assent of any other inquirer in the same department, nor can I think them at all likely to win general acceptance. He maintains that, for example, the English, French, and ordinary German *k*, *t*, *p* are not *tenues*, simple surd mutes, but *aspiratae*, aspirates. He does not know, he says, how a more decidedly aspirated quality can be imparted to any mutes than we give to these. The only people in modern Europe whom he will admit to pronounce them as actual *tenues* are the Saxons and their like in central Germany, and the Hungarians. Now it is certain that the English, missionaries and others, who go among peoples having alphabets that contain aspirate letters—for example, in India—have never found any difficulty in distinguishing these aspirates from their own *tenues*, as they have supposed them to be; and that we, on our part, when they return to us, find no difficulty in apprehending the same difference as exemplified in their pronunciation. The characteristic of an aspirated mute, according to the ordinary opinion—from which I do not understand Prof. Lepsius actually to dissent—lies in this: that a bit of audible breath is interposed between the breach of mute closure, the "explosion," and the following vowel. If our author can discern any such inserted aspiration after our *k*, *t*, and *p*, he must be endowed with a most exceptional keenness of ear. I believe, on the contrary, that, when we utter *pa*, the unclosure of the lips and the commencement of the vowel sound are so absolutely coincident that no blade more substantial than a purely hypothetical one can in any wise be inserted between them. The peculiar *tenues* of the Saxons and Hungarians, it is moreover to be noticed, are quite otherwise explained by Dr. Brücke (Ueber eine neue Methode der phonetischen Transcription, Wien, 1863, p. 10 [230]), as combining a closure of the larynx itself with that of the mouth-organs.

distinction" between surd and sonant, and treat the force of breath, which alone remains behind in whispering, as dependent upon the other, and of secondary value. If, however, I still speak of "strong" and "soft," it is merely a translation of the expressions *fortis* and *lenis*, which have become everywhere conventionally usual. It is often of advantage to employ conventional designations, the meaning of which is known to every one. Just as conventionally usual, but in their literal meaning yet more inaccurate, are the terms *media*, *tenuis*, *guttural*, *palatal*, *lingual*, *dental*, even *cerebral*, and so on. To this is to be added, that the terms "strong" and "soft" of themselves denote the relation quite correctly, and even, if we take into account the whispering voice, more correctly than "surd" and "sonant," of which the former, taken literally, would even be unsuitable. Yet more inaccurate would be "vocal" and "aspirate," since "vocal" is used of the voice in general, and "aspirate" would exclude the *tenuis*. But I am ready to approve any expression which finds conventional assent, and is used in accordance with its strict definition; and especially, I willingly accept of the terms surd and sonant, derived from the Sanskrit grammarians."

" I rejoice at being authorized henceforth to reckon Prof. Lepsius among those phonetists who regard utterance with intonated breath as constituting the fundamental character of a *v* as compared with an *f*, a *b* as compared with a *p*, and so on, and who deem the expulsion of a greater or less amount of breath in the two cases respectively a matter wholly secondary and subsidiary. I did not understand him as taking that ground in his Standard Alphabet, or even in his paper on the transcription of the Arabic; if I failed fully to apprehend his meaning, I am very glad to acknowledge my error. That this doctrine will be accepted by all the phonologists of the next generation does not, in my view, admit of doubt, and it is a marvel to find men (like Max Müller, in his last lectures about language) who still cling to the old view that a *z*, for instance, differs from an *s* primarily by inferior force of utterance. In the fact that there are such persons, that opinion is not yet a unit upon the subject, lies the objection to the terms "strong" and "soft." If all were agreed as to the true nature of the distinction, these terms would be quite innocent; it would be comparatively a matter of indifference how the two classes were entitled: as the case stands, any one who employs them seems to sanction and adopt the wrong theory.

Nor can I assent to Prof. Lepsius's claim that, in any case or in any circumstances, the words "strong" and "soft" denote the relations of the two classes of sounds correctly, or more correctly than "surd" and "sonant" or their equivalents. They imply a difference in the effort of utterance, which does not, so far as I can see, have any existence. That more breath is actually expended in the production of an *s* or *f* than of a *z* or *v* may be true, but it can be true only because, in uttering the

What you say of the dentals—that they are often uttered behind the teeth, not upon the teeth—is quite right: in German, and probably in most languages, the place of contact is some-

latter sounds, the vocal cords are approximated for the purpose of vibration, thus narrowing the aperture through which the breath escapes. If the same is true in whispering, it is for a like reason; here, the vibration is replaced by a tension and approximation of the cords to a somewhat inferior degree. The difference of expenditure is a mere consequence; it is no voluntary act, of which the consciousness takes cognizance. If a distinction of “strong” and “soft” is to be founded on such a difference, then our ordinary sonorous utterance is “soft,” and all whispering is “strong”—and the more feeble and indistinct it is (from insufficient tension of the cords), so much the “stronger” must it be; then *v* is a “strong” letter as compared with *p*, since it admits an expulsion of breath which the latter forbids; nay, even *b* is a “stronger” letter than *p*, for, in producing it, intonated breath is forced up into the closed cavity of the mouth before the breach of labial contact, which is not the case with *p*.

Once more, I altogether fail to see that this estimate of the comparative quality of *p* and *b* ignores the relation, to these or to one another, of the aspirates *ph* and *bh*, or that the two things have anything to do with one another. On the contrary, I am compelled to confess that Prof. Lepsius’s elaborate discussion of the relation of *media*, *tenuis*, and *aspirata*, in his paper on the Arabic alphabet (pp. 105–109), appears to me to throw no new and valuable light upon the subject. So far as I can see, it is an attempt to force the distinction of these three classes of sounds into a dependence upon the force of utterance, the expenditure of breath, whereas the connection of the two is secondary and accidental merely. How the case is with regard to *media* and *tenuis*, sonant and surd, we have already sufficiently seen. But we have also already seen that the essence of an aspirate, as distinguished from either *media* or *tenuis*, lies in this: that it offers a perceptible interval of unintonated breath between the breach of mute closure and the following vowel or other sound. Whenever a bit of an *h*, however brief, is distinctly heard between a *p* or a *b* and a following *a*, for instance, the syllable becomes a *phu* or *bha*, instead of *pa* or *ba*. An aspirate is, not an intensification of anything, but a succession of two diverse elements; it has a temporal, not a dynamical value. Now it is indeed possible, in the phonetic history of a language, that a dynamic element may undergo translation into a temporal, and *vice versa*; an intensified utterance may lead to the aspiration of a mute, a relaxed utterance may reduce an aspirated to a simple mute, whether *media* or *tenuis*: but so also may a vowel become lengthened where a consonant is dropped, a consonant be doubled to compensate the shortening of a vowel, and the like. The one case, like the other, is only accidental and occasional; there is no necessity in any such conversion. A *tenuis*, a *media*, or an *aspirata*—either of the three—admits the most energetic pronunciation which our organs can give it, or may be produced with utter abnegation of effort—both without any modification of its essential character. Were

what variable; it, however, certainly includes the teeth themselves: that is to say, their posterior surface." Also respecting *ś* (English *sh*), I quite agree with you: the sound is produced by a cavity whose posterior entrance lies near the palatal point, and may be formed with either the middle or the extremity of the tongue (in the latter case the sound is "cerebral"); the anterior exit lies at the teeth, which are very essential in producing the rushing quality: it can therefore be regarded either as palatal (or cerebral) or as dental, and would most accurately be styled palato-dental, just as the Semitic "emphatic" (lingual) letters are properly gutturo-dental." Probably, however, the use of the term "dental" will not give way, and we shall be obliged to reconcile ourselves to it.

Instead of *ś* or *ṣ*, you would rather (p. 318) see *ś* or *ṣ* written, without, however, laying any great stress upon the point. You yourself accept *ś* as palatal sign, and regard the sound as that of the Sanskrit palatal sibilant (ऌ). It is difficult to establish firmly any of the differing views respecting this Sanskrit sound: and for this reason, as well as others, I think that the independent sign *ś* deserves the preference.

In the new edition, as you perceive, I have complied with the wish expressed by yourself and many others, and have used for

this not so, we should be ever shifting our mutes from class to class, as circumstances or our change of mood called forth in us a greater or less energy of enunciation.

I can, therefore, only repeat my former comparison, and say that to condition the definition of *tenuis*, *aspirata*, and *media* in any manner on force of utterance is equivalent to conditioning the definition of man, woman, and child on their respective degrees of physical vigor.

" Here, again, I cannot help insisting on the opinion advanced in my former paper, that the teeth themselves play no part in the production of our so-called "dental" letters, *t*, *d*, etc. Even when, in their utterance, the tongue touches the posterior surface of the teeth, the determining contact is made upon the gums behind them. The teeth are not close enough to stop altogether the passage of the breath, and form a mute closure: if the tip of the tongue touches them alone, enough air must slip out to convert the mute into a spirant, the *t* into a *θ*.

" Once more, I regret having to differ in opinion with Prof. Lepsius. I cannot possibly convince myself that the teeth have anything to do with producing the *sh*-sound, or conferring upon it any portion of its quality. In our ordinary palatal utterance of it, the tip of the tongue may be crowded away from the teeth with an instrument, without affecting the sound; and when it is pronounced, as Prof. Lepsius expressly allows that it may be, with the tongue turned back into the "cerebral" position (as the Sanskrit ऌ is produced), how can the teeth possibly take part in the process?

the Sanskritic languages the bases *c* and *j*, instead of *č* and *ž*, for the English sounds of *ch* and *j*. But the addition of the sign ^v above them (*č̣*, *ẓ̌*), as in *š* and *ž*, appears to me altogether to be recommended, since *c* before *a*, *o*, and *u* is sounded *k* even in English and Italian, and in all other European tongues both *c* and *j* have, in all situations, values very different from those which we should thus assign to them. To this is to be added, that the employment of *j* without the sign (as a light *y*) for the Slavonic languages cannot possibly be avoided. Hence I am glad that you are willing after all to allow the additional sign, which will, I am sure, prove itself more and more clearly indispensable.¹⁴ You say (on p. 321) that I am unfaithful to my own principle, viz., that such characters are to be excluded from use as have too greatly varying a pronunciation in the principal European languages, like *c*, *j*, *x*. From the examples which you adduce, one would, indeed, be able to put to use but few of the letters of our Latin alphabet. But I spoke only of those respecting which the general linguistic use is still unsettled, which is not any longer the case with the vowels, nor with *w*, *y*, *v*, *z*, *q*, but is so with *č*, *j*, and *x*. This is therefore still the principal reason why I regard the writing of *č̣*, *ẓ̌*, *x* as important, or even indispensable. I say this merely to guard against a charge of inconsistency, since you give your express assent to the signs I have selected.

As concerns, further, my strict separation of the explosives and fricatives in the choice of bases: you regard this as so much the less necessary, because most fricatives are etymologically developed from explosives. I set out from the fact that, in the history of phonetic development, this very transition into fricatives is, of all others, the most important and characteristic, which usually most thoroughly alters the phonetic relations of a language, and carries with it many secondary changes. It is more important than the mutation of *media* and *tenuis*, which, however, everywhere have independent bases; we do not find it necessary to express in the written alphabet phonetic laws like those by which, in German, every final *media* is pronounced

¹⁴ I am not prepared to admit as altogether conclusive with regard to the usage of the Standard Alphabet these considerations drawn from the customs of the modern European nations. If I am not mistaken, it would soon be found by one who should make practical use of the Alphabet that he was wasting ink and effort in writing a diacritical sign over characters which needed no such addition, because they were used by him in no other value, and he would inevitably begin to leave it off. The decision might safely enough be left to practice.

The use of *j* in the Slavonic alphabets to express a *y*-sound seems a regrettable violation of consistency in the system.

as *lequis*: but it would seem intolerable to pronounce the same letter now *p*, now *f*, or now *t*, now *s*. The method, hitherto so usual, of writing *kh* for *χ*, and *th* for *θ*, has already caused the most inextricable confusion; even in the Greek and Latin grammar, and yet more in that of other languages, it has absolutely obscured and withdrawn from notice the simple ideas which we have to connect with the term aspirate, on the one hand, and spirant, or fricative, on the other: many people do not even yet know that the Greek *χ*, *φ*, *θ*, if pronounced in the modern manner, as fricatives (viz., *φ* as *f*, and so on), are no longer *aspirate*, but *spiratæ* or *spirantes*, or *fricativæ*. In the Siamese language, therefore, we meet (see St. Alph., p. 238) with no fewer than five different *kh*'s, four *ch*'s, and six *th*'s; and, by reason of the scanty means we possess of informing ourselves respecting this language, it would have been absolutely impossible, without a key, luckily discovered, to reduce to order such an orthographical chaos. As regards the sound *χ* or *kh*, the further difficulty comes in, that it is wanting in English and French, and that those who speak these languages have therefore always looked upon the difference between *k* and *χ* as less than that between *t* and *s*, or *p* and *f*. With a sufficiently general transition of explosive into fricative sounds commences a new period of life, in a phonetic point of view, not only for the single sounds, but also for the whole language. The mutations of *media*, *tenuis*, and *aspirata* always go on in a circle; if, however, any one of them, usually an aspirate, has passed over into a spirant, it can never recover an explosive character. Hence the importance, to the linguist, of keeping constantly before his mind the point of development of the sounds, whether explosive or fricative, by means of the use of different bases in representing them; and so much the more, when etymological relationship favors their confusion. For the aspirates, you approve (on p. 332) *kh*, *gh*, *th*, *dh*, also *sh* and *zh*, and naturally also *ph* and *bh*. The separate representation in this way of the aspiration I have likewise favored in the new edition of my work. For the fricatives, however, you would prefer *k'*, *g'*, *t'*, *d'*;¹⁵ con-

¹⁵ Prof. Lepsius does not appear fully to understand the intent of the remarks to which he here refers. I was inquiring what would be admissible substitutes for the signs of the Standard Alphabet where these were not to be had, or, for special practical reasons, should not be adopted. It was not my design to counsel absolutely the employment of the signs marked with the rough breathing for the spirants, and the signs with following *h* for the aspirates; I was not, in fact, taking the latter class of sounds into account at all: but I regarded either style of signs, for the sibilant and spirant sounds, as better for practical use than other more far-fetched representatives which some might be inclined to devise.

sequently, *p'* should be used for *f*, and *b'* for *v*, if one is to be consistent; but you would retain *f* and *v*, after all, because there actually are Latin characters for them. Since, now, *k*, *g*, *t*, *d*, *p*, and *b* have long been used by Bopp and his school for the aspirates (and, on account of the Devanagari, I even yet prefer them for the strict transliteration of ancient Sanskrit), I fear that this admission would lead to still further complications; moreover, the rough breathing has acquired universal value as sign of a guttural aspiration, which is not present in *z*, *θ*, *f*, or can only follow them as a separate element (*f'* for *fh*). For the same reason, I have now wholly abandoned *θ*, *θ*, *z*, *z* for *θ*, *δ*, *z*, *γ*, and have eventually gained your approbation (p. 322) for so doing. To employ the superfluous *x* for *z* has, in truth, always been very enticing, but the general feeling, according to my experience, is too strongly against it to allow of its acceptance. Besides, there would then still be needed a sign for *γ*, which we should no longer have any means of providing.¹⁶

You question (on p. 326) the desirableness of setting up a "faucal" class, having its place of production in the larynx itself." For the languages related with the Sanskrit, indeed, it has little importance, although the Indian grammarians themselves hint at such a place of production, when some of them [see Ath. V. Prâṭicâkhyâ, i. 19, note, in this Journal, vol. vii., p. 351] give to *a* and the *visarga* the name *urasya*, 'pectoral.' But the class has its real significance in the Semitic languages. The Arabian grammarians know very exactly the place of formation

¹⁶ No one will be inclined to question the general soundness of the theoretical views proposed by Prof. Lepsius in this exposition. What opinions will necessarily differ upon, however, is this: how far, in setting up an alphabet, considerations of practical convenience shall be subordinated to those of theoretical consistency, or the contrary. I should at all points, I suspect, be inclined to give a little more weight to the former than Prof. Lepsius allows them. If we must find expression for the almost infinite variety of articulate sounds from the scanty resources of the Latin alphabet, with a little aid from the Greek, there is no Latin letter which ought not to be pressed into the service. If *w* can be adopted into the Standard Alphabet with a value which it has in no prominent European language excepting the English, it would take no great stretch of the same charity to bring in *x* also.

¹⁷ My objection was not so much to the setting up of a class of sounds having their place of production lower than the ordinary gutturals, as to our author's mode of constructing the class, his definition of its sounds, and his declaring it parallel with such a series as *f*, *v*, *p*, *b*. This parallelism I now understand Prof. Lepsius himself to abandon a little farther on, when he pronounces the *alif* not the sonant counterpart of the *ain*, while he has fully granted above that intonation constitutes the essential distinction of *v* from *f*.

of the faucals, *ʔ*, *ʿ*, *h*, and *h*, as altogether different from that of the gutturals. The professional physiologists, too, especially Brücke, fully accept it. Only the name is still a subject of controversy: "laryngeal" has been recently proposed, and with this I too should be perfectly satisfied. As regards the assimilation of the *h* to the following sound, of which you speak, I understand the process in this manner: that the characteristic place of production is always the larynx, but that the emission or the checking of the breath takes place in the position of the following or of the preceding sound, and so in very varying relations of the mouth organs.¹⁸ Respecting the lightest explosive sound, also, which I write *ʿ*, the linguistic physiologists are in accordance: in the Semitic languages it appears as a full and universally audible consonant. It is indeed true, as you claim, that the utterance of a *ʿ* before an initial vowel can be avoided, if one does not close before it the already opened throat; but usually it is uttered, and the usual practice has caused it to be written.¹⁹ The Indian *α* does not, indeed, admit of direct identification with the Semitic *alif*; I have therefore preferred to

¹⁸ This statement is not altogether satisfactory, in my opinion. A vowel, as every one holds, is a sound produced in any one of a large number of different positions of the mouth-organs, with the vocal cords in the larynx in a state of sonant vibration: its "characteristic place of production" is not the larynx, but the modifying organs of the mouth, and from these it gets its descriptive name. An *h*, now, is also a sound which is produced in any one of these same positions of the mouth-organs, but with the vocal cords in the larynx only slightly approached, even less than in whispering a vowel. Why, then, shall we pronounce the larynx the "characteristic place of production" of *h*, any more than of the vowels, as spoken aloud or whispered? Why call *h* "laryngeal," and not the vowels also? I cannot but continue to hold that *h* finds its best position in the alphabet as corresponding surd to all those classes of sounds which do not have each its own special surd.

¹⁹ It is doubtless necessary, in transliterating the Semitic alphabets, to take some account of this element. What I protested against, and still protest against, is the undue enhancement of its consideration, by adopting it into the general alphabet as a consonant, entitled to rank with the other consonants. What separates it from these is that it lacks a positive value as an element of spoken speech; it is not audible. The aperture of the throat, if it be not already open, requires unclosure before the utterance of a vowel; so the aperture of the lips, if it be not already open, requires unclosure before the utterance of any consonant which is not a labial mute; the former unclosure is capable of being exaggerated until it becomes perceptible to the ear which is watching for it close at hand; so also is the latter: the one is, in my view, just as much entitled as the other to consideration in the general theory of sounds, and to representation in the alphabet.

strike out my reference to it (see p. 68, and compare p. 314). To the sound of ' the designation "soft" is applicable, but not "sonant:" it is only weaker than *ain*, not intonated.

Most of the preceding remarks are merely intended for the further explanation and justification of those of my views and proposals—put forward in the Standard Alphabet, but only briefly or not at all confirmed by detailed reasonings—to which you have taken exception. You object only in a few points to the mode of transcription, and this is, as regards the practical object of the work, which is also its chief object, the important matter. The second edition in this respect accords decidedly more nearly with your views; and I may therefore hope with so much the more confidence for your further approval, on which I lay great value.²⁰

Berlin, October 18th, 1863.

²⁰ In these notes—as also, to a less degree, in my former essay—I have entered more fully into discussion of theoretical points, touching the mode of production and the classification of sounds, than into a consideration of the signs to be adopted for them. This last is a matter of individual preference, and affords a field for the widest diversities of choice. It can only be settled by a conventional assent to some one's proposals, by a submission to the claims of some system which comes backed by such authority as gives it a fair prospect of making its way to general acceptance. Prof. Lepsius's Standard Alphabet has seemed to me to possess more of that authority than belonged to any other system, while it is at the same time marked by the learning and good sense which are needed to justify its adoption. I heartily wish it the successful career to which, in my view, it is justly entitled by its merits.

The second edition of Prof. Lepsius's work differs from the first comparatively little in the introductory or theoretical part, but is vastly extended beyond its predecessor in the practical part, the application of the proposed alphabet to the actual transliteration of languages already written, or to the expression of languages heretofore without an alphabet. Considerably more than a hundred different tongues, of the most various locality and character—Asiatic, African, European, and American; living and dead; literary, illiterate, and hitherto unwritten—are here submitted to phonetic analysis and description, and are supplied with modes of writing based on the Standard Alphabet. The author's great and many-sided learning, his industry in collection and perseverance in research, his acuteness of ear and ingenuity of explanation, as exhibited in this immense work, cannot but meet the full and grateful acknowledgment even of those who may be not altogether satisfied with the system of signs adopted, or incredulous as to the feasibility of a general alphabet.

ADDITIONAL NOTES.

1. On the English Vowel-System.

Prof. Lepsius has devoted a few pages of the second edition of his *Standard Alphabet* (p. 49 sq.) to a succinct account of the vowel-system of the English language. As, however, notwithstanding its general correctness, I am unable to accept in all points his analysis and descriptions, I have felt impelled to take up the subject here, and to give my own views of it. I am far from entertaining the belief that I can explain all its difficulties, or lay down an authoritative scheme which shall be accepted by standard English speakers everywhere. Owing in no small measure, doubtless, to the insufficiency of English orthography, and its impotence as a means of fixing pronunciation and restraining its variations, there are in our language local and even individual peculiarities of utterance as regards the lighter shades of vowel-sound, to a degree, I should think, beyond what prevails in other tongues among cultivated speakers. To this cause is in part due the non-agreement of English phonologists, though in greater part to more subjective reasons. Final accordance must be the result of many men's labors; and I shall be glad to have contributed my mite toward an issue so desirable.

Our open or "Italian" *a* (in *ah! far, heart, aunt*), in the comparatively small number of words in which we have retained it, is the same sound which the letter *a* and its correspondents prevailingly have in other languages, ancient and modern, and which the sign was devised to designate.

The first modification of this sound which we have to notice on the palatal side is our "short *a*," or "flat *a*," as found in *hat, axe*, etc. It is a true medium between *a* and *e*. There is nothing at all nearly approaching it in German; both the German and the French open sounds of *e* stand decidedly more remote from it than from the normal *e*. The present Parisian pronunciation of *a*, as in *malade, patte, sac*, is almost the same with it, but, I should say, somewhat less flat, more open and accordant with *a* proper; differing from the English sounds as much as, for example, the French *ê* in *tête* from *é* in *thé*. There is therefore no propriety in representing the *a* of *hat* by the sign for an opener *e*; Prof. Lepsius's proposal, of an *a* with a subscript *e*, or *a*, is a very suitable one.

It is claimed by some that the *a* of a considerable class of words, *graft, grasp, dance*, and their like, the pronunciation of which has only recently, and not yet universally, been flattened from the pure *a*, is less removed from the latter than is the *a* of *hat*, and constitutes an intermediate term between the two. I do not venture to speak with certainty upon this point, being one of those who have retained the full ancient *a* in all such words, and in whose mouth, accordingly, the new sound is not native or natural.* Whether a real medium between *a* and *e* is going to establish itself as a permanent member of our vowel-system, the future only can determine; but I should hardly think it likely.

Our mention of the *e*-sounds may begin with our common "short *e*" (in *met, head, said*, etc.), respecting the relation of which to the short *e* of other tongues, see the remarks of Prof. Lepsius above (p. 338).

The most nearly corresponding long sound, which goes with us by the name of "long *a*" (in *mate, great, vail, they*, etc.), is chiefly distinguished from this in quality, as remarked in a former note (p. 338), by being a slide: it begins with an *e*, and runs down to an *i*. To compare the quality of its initial element with that of the short *e* is therefore not easy, since one is very liable, if he prolongs it in order to examine it more closely, to unwittingly distort it a little. If difference there be between them, it is excessively slight, and of no practical account as compared with the distinction of the two sounds as simple vowel and as slide. If any one chooses to maintain that the beginning of *ē* is closer than *ē*, I should not care to dispute him: such is, in general, the relation between our corresponding long and short vowels.

It is fairly a matter of question whether we are not called upon to admit the existence of a third *e*-sound, before *r*, in such words as *there, their, care*. Upon this point also I am compelled to speak with diffidence, inasmuch as I belong to the party, not insignificant in numbers on either side of the water, but declared heterodox by the orthoëpists, who in all the words of this class speak the flat *a* (*a*). An *e* in such a position certainly seems to possess some points of difference from either of the other two: it is unlike our long *e* (*they*) in lacking the vanishing sound of *i* which belongs to the latter; and yet it cannot be reckoned a short *e*, because its conjunction with the following *r* produces an effect which elsewhere only appears in connection with our long vowels and diphthongs, and which is called out by all these excepting *a*, *ā*, and *ē*: examples are *care, hear, oar, poor, fire, sour*. As regards this whole class of cases, I am far from content with the explanation which is given by Prof. Lepsius, following the authority of more than one English orthoëpist. He teaches, namely (p. 50), that the *r* itself is converted into a guttural vowel, analogous with the Sanskrit vowel *ṛ*, and forms a diphthong with the preceding vowel. Now, in the first place, no vowel *ṛ* in Sanskrit is ever conjoined with another vowel, either before or after it, nor can I conceive that the *r* should ever be cognizable as a vowel in such a position.* In the second place, I can find no trace whatever in my own throat of a guttural quality in the *r* of these or any other words, and I can hear none in the throats of those about me. It cannot well be doubted that such an utterance appears in some mouths, else we should not meet with its description; but to treat it as a general feature of English pronunciation is certainly wrong; I should incline to regard it as dialectic rather than English. In my view, the second vowel sound, compounded with the principal one of the syllable, is no other than the neutral vowel, in the form which it is accustomed to assume before an *r*, as in *fur, her, sir*, etc.: a bit of this is slipped in before the smooth *r*, which, then, is either uttered in the usual slight and inconspicuous manner, or, in the practice of some, may be replaced by a guttural vibration, or, once more, is omitted entirely, as is the very common usage with careless and easy speakers: certainly a large portion of English speakers absolutely silence every *r* which is not fol-

* For a fuller discussion of the quality and occurrence of *r* as a vowel, see the next note.

lowed by a vowel; the inserted transitional vowel, in the words under discussion, takes its place. The word *care*, then, is properly to be written, after the initial guttural mute, with an *e*, followed by the neutral vowel, and, after the latter, the *r*: it contains four distinct phonetic elements. And whether the *e*-sound is precisely accordant in quality with the *e* of *mel*, or (as seems to me more probable) of a slightly superior openness, is at least a question of no practical consequence; nor would, in any case, a separate sign be required for its representation.

The extreme pair of vowels on this side are the *i* of *hit* and the *i* of *pique*, or, as we are accustomed to call them, "short *i*" and "long *e*." These differ from one another not in quantity alone, but also, and to no insignificant degree, in quality: and, as elsewhere in our vowel system, the short vowel is the more open one. Dr. Brücke (*Grundzüge der Physiologie und Systematik der Sprachlaute*, p. 23) calls our short *i* in *hit*, as well as the vowels of *not*, *full*, and *but*, "imperfectly formed." But I am unable to see any good reason for the designation, either in theory or in fact. The very name "imperfect vowel" seems a contradiction in terms. If a vowel is a simple and homogeneous tone—that is to say, if it is a vowel and not a diphthong or a slide—it is an utterance through a single determinate position of the organs of the mouth and throat; and who shall assume to pronounce one position of these organs less "complete" than another? It might, indeed, possibly be claimed that a certain position is transitional and transient only, incapable of being maintained; but such a claim will be found, upon examination, destitute of any real foundation. Our organs of articulation can assume no position which they are not also capable of continuing, provided we control them aright. The difficulty lies only in the directing mind: we are so in the habit of touching the short vowel briefly and lightly, and of protracting the nearly kindred long vowel, that when we try to dwell upon the former, we are apt to slide into the latter. So also, hardly any one, having struck a musical note, can strike another a quarter of a tone above or below it in pitch, not because either of the two is easier or harder to sound than the other, but because the conception is occupied with the first, and is unable to form so distinct an idea of the second as to hold the organs to the work of its production. And, in point of fact, these short English vowels are, in singing, found and proved protractable: no English ear can fail to detect in a moment the performer who, in singing *ī* to a long note, puts an *ī* in place of it. The French has no such sound as our *ī* in *hit*; every French *i*, long or short, has precisely the same quality, and the matter is one which he who has to teach French pronunciation to English pupils finds occasion to insist upon often and strongly; but I do not see how the possession of a short *i* differing from the long—even if, perhaps, differing to a less degree than ours—can be denied to the German.

Upon the other side of the vowel-system, the first place is taken by the "broad *a*" of *all*, *haul*, *ought*, *broad*, etc., which is, as Prof. Lepsius truly describes it, opener and nearer to *a* than any *o*-sound in French or Italian; and, while these last admit of representation by a diacritically distinguished *o*, it must be written with a sign which denotes it as a medium between *a* and *o*: on the side of theory, there can be no ob-

jection to Prof. Lepsius's proposal, an *a* with subscript *o*—thus, *a_o*. Our "short *o*," in *hot*, *what*, etc., is usually regarded as its corresponding short vowel; but not with entire accuracy, for it is a decidedly opener sound. This, indeed, as has already been remarked, is a general characteristic of our short vowels, as compared with their long counterparts: but it seems to my ear that there is more difference of quality between the vowel sounds in *what* and *all* than between those in *hit* and *pique*, or in *full* and *fool*, or in *hut* and *hurt*. The *a* of *what*, in my opinion, is fully as near to the *a* of *far* as to that of *all*, and might not less suitably be written as corresponding short to the former than to the latter. To represent it by *ă* is no impropriety, provided it be at the same time described and well understood as medial in quality between *a* and *o*.

Our "long *o*" (in *tow*, *vote*, *boat*, etc.) slides down to *u*, in the same manner as *ē* (in *they*) to *i*; and with the same exception—namely, that before *r* (in *door*, *pour*, etc.) it replaces the vanishing sound of *u* with a bit of the neutral vowel: and this time, I believe, there is no room for the suspicion that an opener quality is imparted to the *o* itself. The proper short *o*, strangely enough, is altogether wanting in accented syllables in English, save as it is found in the local pronunciation of a few words, such as *home*, *whole*, *stone*. Such pronunciation is quite common in New England, although, so far as I know, hardly any two individuals agree precisely in the list of words of which they shorten the vowel. How extensively it may prevail in other portions of the English-speaking community, has not come to light: but, however the orthoëpists may reject it, a phonologist can hardly help feeling tempted to encourage a tendency which would remove so striking an anomaly as the lack of a short *o* from the vowel-system of our language.

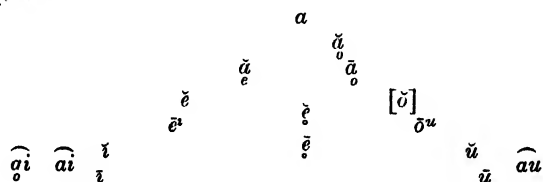
The difference between our short *u* in *full* and the corresponding long *u* in *rule*, *fool*, etc., is precisely similar, in kind and degree, to that between the *ĩ* of *hit* and the *ĩ* of *pique*, as already described.

Our "long *u*," as every one knows, is no simple vowel, but a syllable, composed of a semivowel and vowel; it is as distinctly *yu* as if it were so written. After *r*, however, by reason of the physical difficulty of unrolling the tongue from the *r*-position and raising it to that in which the *y* is uttered without too great expenditure of effort and time, it has now become usual to omit the semivowel altogether: all the orthoëpists allow *rude*, for example, to be spoken precisely as if it were written *rood*. A similar physical difficulty experienced in combining the semivowel with the series of dental letters, *t*, *d*, *th*, *s*, *n*, *l* (which also confine the tongue, though less markedly than the *r*, which is spoken farther back in the mouth), gives rise to a modification of the prefix after these letters also, in accented syllables; it is made both briefer and less close, having rather the quality of an *ĩ* than that of an *ĩ* or *y*. When, however, the preceding consonant is, as it were, lifted off the vowel by an accent upon the syllable just before it, the *yu* is fully uttered; as in *pénury* (*pěn-yũ-rĩ*) compared with *penúrïous* (*pe-n'ũ-rĩ-əs*). It is, indeed, very common in popular pronunciation, in both England and America, to silence the prefix entirely in an accented syllable after a dental; speaking *penúrïous*, for example, as if it were spelt with *oo* in the second syllable.

Of the simple vowels, there remain to be noticed only the pair of neutral vowels, the "short *u*" of *but, son, blood*, etc., of which I have spoken sufficiently above (see note 2, p. 330), and its corresponding long sound, which appears only before an *r*, and is represented in that position by many of our vowels and digraphs: as in *hurt, bird, herd, heard, work, journey, myrrh*. This latter, like the other long vowels, varies a little in quality as well as in quantity from the short, and in the usual direction; it is a closer sound; the relaxation of the oral organs is more complete, the whole mouth more shut together.

Our diphthongs demand a word of further explanation. We have three of them, in *pine, pound, point*. The first two are less properly to be called diphthongs than slides: in our "long *i*," as we call it, the tone runs down from the openest *a* to the closest *i*; in *ou*, it makes in like manner the whole descent from *a* to *u*. They are the more distinctly slides, inasmuch as neither the initial nor the final element in them is, as they are ordinarily pronounced, more perceptible than any of the intermediate sounds; hence they differ slightly from the German *ei* (and yet more from *ai*) and *au*, in which the initial element is briefly dwelt upon, and made more prominent than the rest. When they are protracted, as in singing, it is, of course, the *a*-sound with which they commence that receives the increase of quantity. This absence of distinctness of their constituent elements, now, gives them a peculiar likeness to simple sounds: very few, certainly, of those who use them have any idea that they are not homogeneous tones. Moreover, the closure of the mouth-organs by which they are produced is made so easily and rapidly that they hardly require more than the time of a short vowel. With the *oi* of *point* the case is quite different: the *a* with which it begins is made quite distinctly audible, and is even a little dwelt upon, decidedly more so than the initial element in the German *eu* and *au*, with which diphthongs our own otherwise corresponds as closely as possible.

The systematic presentation of the scheme of English vowels, then, will be as follows—putting, for convenience's sake, the neutral vowels in the center of the triangle, since the *u* and *o* sounds are wanting in our alphabet:—



It may be remarked, in conclusion, that, as the long and short vowels in our system differ always in quality as well as in quantity, we do not need, in order to maintain their identity, to be very exact in keeping them of the same length. In the usage of certain individuals, in certain styles of enunciation—even, as some claim, in certain words according to general usage—the short vowels are a little stretched out, the long a little abbreviated; yet not in a way which admits of definition and pre-

scription, or demands more special notice. To attempt to distinguish and mark by special signs more shades of vowel sound than are given in this scheme (with the single possible exception, as explained above, of the *a* of *graft*, etc.) would be, I am persuaded, a work of superfluous and hair-splitting care:

2. *On the Relation of Vowels and Consonants.*

The question of the mutual relation of vowels and consonants, of what constitutes the essential distinction of either class from the other, is one of primary interest as regards the theory of the alphabet, and does not appear to me ever to have been taken up and discussed in a wholly satisfactory manner. In my criticism of Prof. Lepsius's Standard Alphabet, to which he has replied in the above letter, I set forth, in a somewhat brief and cursory manner, my own views upon the subject. But inasmuch as they do not seem to have won his assent, and as the exposition of them there given may appear equally unconvincing to others who might possibly be won over by their fuller discussion, I propose in this place to state and defend them anew.

The mode of production of the consonants in general, involving a consideration of the positions taken up by the mouth-organs in uttering them, and the character of the material furnished for them by the lungs and throat, whether intonated or unintonated, is a comparatively easy subject, and is now pretty thoroughly worked out; only a few doubtful and difficult points remaining, concerning the character of certain more rare and exceptional sounds, or concerning what are the essential and what the accidental characteristics of others. The vowels are a more difficult subject, and only the most recent investigations of such men as Willis, Kempelen, Ellis, Helmholtz, Brücke, have been successful in giving us anything like an exact scientific definition of what makes an *a*, an *i*, an *u*, etc., as distinguished from one another; and, approximately, by what physical action they receive their peculiar and characteristic quality. I say approximately, because the differences of position in the mouth-organs by which they are produced are in part so slight, so obscure, and so complicated, that they may for a long time, if not always, continue to elude exact observation. For all present practical purposes, however, so far as concerns the needs of the historical student of language, the comparative philologist, the physical system of sounds may be regarded as, in all its parts, fairly understood.

In all its parts, I cannot but think, better than in its totality as a system. Those who study the spoken alphabet have been content, for the most part, to treat the vowels and consonants as two independent bodies, partners in the work of articulate expression, indissolubly married together for the uses of speech, yet distinct individuals, to be classed, arranged, and described separately, and afterward set side by side. Now it is, certainly, theoretically conceivable that the products of the organs of articulation should be thus of two distinct kinds; just as the human race is composed of two distinct sexes, each having its

own part to play in the work of the race, any true intermediate form or combination of the two being impossible, any apparent one a monstrosity. But is this actually the case in the spoken alphabet? I think decidedly not. The simple fact of the occurrence in our phonological vocabulary of the term "semivowel" is of itself enough to shake such a theory to its foundation. Think of a woman who should be a "semi-man!" There is, on the one hand, a not inconsiderable class of sounds, known by various names—as semivowels, liquids, nasals—in which, though we generally reckon them as consonants, we recognize a special kindred with the vowels, inasmuch that they even sometimes assume vocalic value: they are especially *l*, *m*, *n*, *r*. On the other hand, there are two vowels, *i* and *u*, which are so closely allied to consonants that, when we put them in the same syllable before another vowel, we can hardly keep them from passing into sounds which we are accustomed to represent by *y* and *w*, regarding them as consonantal, and not vocalic. These are the principal facts which seem to oppose the theory of the independence of vowel and consonant, and compel us to inquire more narrowly into what we are to understand respectively by a vocalic and a consonantal character.

Probably no better and more truly descriptive designation than "consonant" could be found for the class of sounds to which we assign that name. It means 'sounding along with' a letter of the other class, a vowel. By this is not at all intended, however, that a consonant cannot be uttered except in combination with a vowel: every consonant can be so uttered; the semivowels, sibilants, spirants are continuable sounds, not less than the vowels; one may utter an *l*, an *s*, a *v*, or their like, as long as his breath will hold out; and even the mutes may be made distinctly audible by explosion with breath alone, with a mere puff of unarticulated air. The epithet is a historical one, not a theoretical. In the actual usage of language, consonants never do occur independently: no word is composed of consonants alone; a vowel is a necessary constituent of every one of those items of which our vocabulary is made up. The same is true of the lesser articulate entities into which we divide most of our words, namely syllables: every syllable also must contain a vowel, or a sound doing duty as such. Upon this point we must dwell for a time: the distinction of vowel and consonant stands so intimately related with the theory of the syllable, that the latter positively requires at our hands some explanation and definition, in order to the comprehension of the former.

The historical study of language has proved that the syllables composing our present words are, for the most part, elements originally independent, by the combination and fusion of which polysyllabic words were produced. Each such syllable was composed of, or else necessarily contained, a vowel, and after their composition their identity as separate syllables is often still preserved. But in what does this syllabic identity consist? When the separate individuality of the elements is lost so far as meaning is concerned, why is it still phonetically preserved? Why do not the two words become one syllable when they become one word? or why not always, as they do sometimes? What, in short, is the phonetic distinction between a monosyllable and a polysyllable?

None of the definitions of a syllable which I have met with have seemed in all respects accurate and satisfactory. The most usual and current one amounts nearly to this: a syllable is that part of a word which is uttered by a single effort of the voice. Such an account of the matter is not of the slightest value. Just as much is a whole word, a whole sentence, uttered by a single effort of the voice, when the speaker knows what he is going to say, and says it at once in conscious connection. It takes a certain amount of reflection to recognize a word as composed of separate syllables. The untought speaker, who has not learned to examine and theorize about what he says, utters his word without any thought of analyzing it into parts, without feeling a succession of efforts as necessary to the enunciation of the separate syllables, any more than of the separate letters. Indeed, even upon reflection, it is much more proper to speak of the letters than of the syllables as formed by so many efforts of enunciation. Take, for instance, the word *blend*. It is, as every one perceives, a single syllable; but it is a unity of a very complex composition. In its utterance, the organs of the mouth put themselves in no less than five different positions in succession. First, with the lips closed, a little breath is forced up from the lungs into the closed cavity of the mouth, intonated on its way through the larynx by being made to set the vocal cords in vibration. This lasts but for the briefest moment; before the cavity is so filled as to stop the expulsion, the lips are unclosed, and the *b* is heard. At the same instant, the tongue has been made to touch the roof of the mouth at its tip, while the unintermitted current of sonant breath streams out at its sides, giving the *l*-sound. Next, the tongue changes its position: its point is released from contact and depressed in the mouth, resting against the lower teeth, its upper flat surface approaches the palate, and the *e* makes itself audible. Once more the tongue shifts place; its tip is again applied as in forming the *l*; but this time no opening is left at the sides; contact along its whole length prohibits all emission of air through the mouth; but the passage from the mouth through the nose, hitherto closed, is thrown open, and the stream finds exit there; and the sound is *n*. And lastly, with no change of place on the part of any of the other organs, the passage into the nose is shut again; the intonated breath is expelled a moment longer into the closed cavity of the mouth, and the syllable is closed with a *d* (which, however, requires, in order to be made distinctly audible, a supplemental unclosure of the organs, though without the utterance of any vowel). All these changes, which it has taken so long to describe, are performed with such rapidity and precision, one position of the organs succeeds another so closely and accurately, that no intermediate transitional sounds are apprehended by the ear during the process: it hears five successive sounds only, forming a syllable. In what true sense, now, can this complicated process be called a single effort of the voice? One element of unity, it is true, there is in the word: from its beginning to its end, there has been an uninterrupted emission of intonated breath through the larynx. But, in the first place, this is not necessary in order to make the unity of a syllable: *strength* is also a single syllable, composed of six different sounds; but the intonation of the breath begins with the third element,

r, and continues only through the fourth and fifth, e and ng; the sixth, th, like the two first, s and t, is produced with breath unintonated. In the second place, unbroken continuity of intonation does not suffice to make the unity of a syllable; the word *navy*, for example, requires but four successive positions of the organs of articulation, and is intonated or sonant from beginning to end, yet it is a word of two syllables. The reason for this is, as we usually say, that it contains two separate vowels. But the words *token*, *able* are also dissyllabic, although they contain but one pronounced "vowel" each: for the e in their final syllables is altogether silent; there is nothing after the k in the one but an n; nothing after the b in the other but an l. The question to be determined, then, is: What is there in common to these three words which makes them all alike to be reckoned as of two syllables? And the answer, I think, is clearly this: among the four sounds of which each is composed, there are two which are of so much more open position, more sonorous and continuable, than the others with which they are connected, that they make upon the ear the impression of two distinct phonetic impulses, separated and at the same time connected by the closer utterance which intervenes. The distinction of syllables is primarily made, not by the mouth of the speaker, but by the ear of the hearer: the articulating organs are engaged, in the enunciation of any word, long or short, in an unintermitted series of changes of position, from the first letter to the last, and are conscious of no relaxation of effort; the ear apprehends the products of the different positions as so many successive entities, but at once classifies them, arranging them in separate groups, in which the closer sounds are subordinated to the opener. If the word *abracadabra*, for instance, be uttered, while the emission of intonated breath is one and continuous, and while the articulating positions of the mouth-organs are eleven, each giving rise to a separate sound which is distinctly heard, we yet hear five unities, just as if a were uttered five times successively, with only a pause, a hiatus, intervening between each two enunciations. So in *endogenously*, or any other like word. The flow of articulated utterance is parted into portions, not only by a complete intermission of utterance, but by that partial check or impediment which is interposed between the opener sounds by the closer ones: and, as the actual hiatus is comparatively infrequent in spoken speech, it is mainly true in practice that the constitution of syllables depends upon the antithesis of opener and closer articulations, the former being their central and necessary constituents, to which the latter are accessories and adjuncts.

Into the details of the construction of syllables, as formed and tolerated in different languages, our present purpose does not require us to enter: these, as every one knows, are very various, depending upon the energy of articulation of the different nations, the degree of effort which they are severally willing to make in enunciation. The Polynesian will not combine more than one closer articulation, or consonant, with each opener articulation, or vowel, which latter, moreover, must always succeed the former; the Englishman, in exceptional cases, and under certain conditions of arrangement, suffers as many as three consonant sounds before the vowel, and four after it, as in *strands*, *splints*, *twelfths*.

Now, in the system of spoken sounds, there are some which are of so close position, so little clear and resonant, that they are never used otherwise than as consonants: that is, they appear in actual speech only as combined in the same syllable with the opener sounds. Such are, above all, the mutes; and the sibilants and spirants are, for the most part, in a like case. We may utter or reiterate a *v*, a *th*, an *s*, an *sh*, as much as we please, but we shall not succeed in making upon any ear the impression of syllables. Again, there are others which are so open that they are always vowels and not consonants: they never occupy the position of adjuncts in the same syllable to a yet opener sound which is apprehended as the vowel of the syllable. Such, for instance, are *a*, *e*, *o*. But there is also a not inconsiderable class of sounds which are capable of use with either value. Among those which we usually style vowels, *i* (*ee*) and *u* (*oo*) are of this character. They are, as is well known, the vowels which are produced by near approximation of the same organs in the mouth which are used in forming consonants also: in uttering *u*, there is a pretty close approach of the lips, whose complete closure gives *p* or *b*; in *i*, there is a like approach of those parts of the tongue and palate whose contact generates a *k* or *g*. Hence, accordingly, as we are wont to express it, the readiness with which they pass over into the semivowels *y* and *w*: a transition so common, in so many languages, that it is needless to give any illustrations of it here. And what are these "semivowels?" They are nothing but *i* and *u* themselves, deprived of the quantity and stress which belong to a full vowel utterance. They are not distinguished from those vowels by a difference in the position of the mouth-organs, or in the material emitted from the throat through them. Put *u* and *i* side by side, and whether their combination shall require to be written *ui*, or *wi*, or *uy*, will depend entirely upon the force and time which are allotted to each respectively; if both are struck alike, the product is *ui*, two vowels; if the former be made the principal member of the combination, the other being abbreviated and slighted, the result is *uy*, a vowel and following semivowel; if the reverse, a semivowel and following vowel, *yu*. It is true that we are able to pronounce the combinations *ye* and *woo*, putting before each vowel, audibly, its corresponding semivowel: but in such cases, for the sake of preserving the distinction, we make the semivowels closer than usual, approximating the *y* nearly to a sonant counterpart of the German *ch*-sound in *ich*, the *w* nearly to the German *w*-sound in *quellen*—yet not converting them into these sounds: for if the *y* of *ye* and the *w* of *woo* be prolonged, the *i*- and *u*-sounds will be found distinctly apprehensible in them, even though a little friction of the current of air against the nearly closed organs may also be heard; whereas, in the other sounds, which are true fricative consonants, the proper vocalic character is entirely obliterated by the rubbing of the emitted air against the sides of the orifice through which it finds exit; there is resonance, but no vowel. And in our ordinary pronunciation of *y* and *w* we do not—or we need not, and do not except in special cases, when striving after a peculiarly distinct utterance—attain this higher degree of closeness, but only that corresponding to *i* (*ee*) and *u* (*oo*). It is practicable to pronounce a distinct *y* and

w before a vowel with that yet opener position of the mouth-organs in which are formed our short *ɪ* (in *pin*) and our short *ʊ* (in *full*); and even our *e* and *o*, if slighted in the same way before *a*, will make recognizably, though less distinctly, the same impression. To prove, now, that *y* and *w* are not vowels, but consonants, is surely unnecessary: the general consent of alphabetic usage and of the opinions of phonetic theorists is enough to establish their consonantal character. That some nations, as the Latin, have had no peculiar sign for them, but have written them with the signs for *i* and *u*, only proves the economy of their alphabetic systems, and attests the close relation subsisting between these corresponding semivowels and vowels, their virtual identity as articulations.

If the vowels are thus found in part capable of assuming a consonantal value, so, also, some of the consonants are capable of use as vowels. This has already been pointed out and briefly illustrated, and will require but little farther treatment at our hands. The consonants most often employed with vocalic quality are *l*, *n*, *r*. Let us notice the circumstances in which they exhibit their different values.

In our two words *talc* and *tackle* (*tak-l*) we have precisely the same four articulations and articulated sounds, with this difference: in the former word, the *l*-sound precedes the *k*-sound; in the latter, it follows it. But in the one case, *l* is a consonant, and the word is a monosyllable; in the other case, the word is a dissyllable, and *l* is the vowel of its second syllable. How is this further difference the result of the one already pointed out? Clearly enough, it is owing to the position and surroundings of the *l*. *L* is so open and resonant a sound, it has so much of that quality which makes a vowel, which gives a vowel its capacity to stand as the central and essential constituent of a syllable, that it is able to perform the office of a vowel, when put in contrast with a preceding closer sound like *k*. But it is not open enough to maintain a vocalic character when put alongside of the full vowel *a*. The same is the case in the two words *plaid* and *paddle*, which are also made up of identical elements, and differ only in respect to their order. An *l* either before or after an *a* is, by contrast with it, a close sound, consonantal; the ear recognizes the *a* alone as the vowel of the syllable which contains them both; but in combination with the preceding close *k* or *d*, and not followed by any opener sound, it is itself open enough to make the impression of a syllable; it is vocalic. In our previous example, *blend*, there is a regular *crecendo-diminuendo* scale of openness: we begin with the contact-letter *b*, open a little to the *l*, and yet more to the *e*, then close partially in the *n*, and end with the contact-letter *d*. The whole is but one syllable, and furnishes us an illustration of the normal way in which a complex syllable is made up. Change the position of either *l* or *n*, so that they are separated from the full vowel *e* by a sound closer than they themselves are, and we obtain either such combinations as *lbend* or *nbled*—which, though not absolutely unpronounceable, are rejected in practical use as too harsh and difficult—or words of two syllables, *bledn* (like *deaden*) or *bendl* (like *bundle*). In the Lepsian orthographical system, an *l* or *n*, or any other consonant, when thus used with a vowel value, is written with a

diacritical point, a little circle beneath; and it is altogether proper to do so; the difference in the office is sufficient to make such a difference in the sign desirable. Only we must be careful not to commit the error of supposing that there is any articulate distinction between the two sounds, any element present in the *l*-vowel, for example, which is wanting in the consonant *l*: the distinction is only, like that of *i* and *y*, *u* and *w*, one of quantity and stress of utterance.

To illustrate the use of *r* as vowel in like manner, out of our own language, is not easy; there are too many controverted points concerning the pronunciation of our *r*, in the detailed discussion of which the attempt at illustration would involve us. In my own opinion, the *r* by itself is not employed by us as a vowel; the neutral vowel almost always comes in either to accompany or to replace it. But in other tongues, the *r* is used as a vowel with much more freedom than is either *l* or *n* in any known form of human speech. The Sanskrit furnishes the readiest exemplification of this use. In Sanskrit, the *r* is a vowel which may stand anywhere: it is not restricted, like *l* or *n* with us, to an unaccented syllable, following accented syllables in the same word, that contain full vowels: it receives the accent, as in *karmakṛt*; it is the sole vowel of a monosyllable, as in *hr̥d*; it forms an initial syllable, as in *ṛtú*. It is, to be sure, truly regarded as everywhere the historical descendant and representative of a full vowel joined with a semivowel *r*, of an *ar* or *ra*, but that is not material to the point of our present discussion. So our vocalic *l* and *n* are only relics of former syllables containing vowels; and there is doubtless no good reason for believing that any of the "semivowels" or "liquids" has ever come to do duty as a vowel in other than a like way. We are inquiring in virtue of what qualities they do actually come to be called on to perform such duty, while the mutes, as *b*, *d*, *g*, and the spirants, as *v*, *th*, *γ*, are never treated in the same manner.

It must, however, be further noticed that the consonants which we have been considering are not necessarily and inevitably pronounced as vowels, even in the favoring situations where we have seen them assume this character. As in the case of *i* and *u*, a certain degree of stress and quantity is required to make vowels of them. They may be, even after a close letter, so abbreviated and slighted, so subordinated to the preceding syllable, as to form to the ear only a harsh and difficult appendage to that syllable. This is their treatment in French, in the prose pronunciation of such words as *sabre*, *table*, where the "mute *e*" is really mute, and the words are monosyllables. It is usual, indeed, to half or quite whisper the *r* or *l* in such situations, especially when the preceding mute is a surd, as in *lettre*, *miracle*. Their vocalic quality, then, amounts simply to this: that they are capable of receiving, and under certain circumstances do receive, in many languages, without any change of articulate quality, the full office of a vowel in forming syllables. A higher grade of vocalic capacity belongs to *r* and *l* than to any other of the sounds usually reckoned as consonantal, in virtue of the more open position assumed by the mouth-organs in their utterance, which gives them a share in the sonorousness and continuability characteristic of the vowels. A next lower degree is shared by the nasals,

which derive a like quality from the openness of the nasal passage, even though the mouth is shut while they are spoken. How *n* is used as vowel in English has been already illustrated. There would seem to be no reason in the nature of things why the other nasals, *m* and *ng*, should not be treated in the same way; yet I am not aware that, in English or elsewhere, they are allowed to stand as the vowel of a syllable. In our vulgar colloquial *yes'm*, indeed, for *yes ma'am*, we have a single actual, though a disallowed, instance of *m* as a vowel, which is just enough to show the possibility of so employing it. The difficulty in the way is a historical rather than a theoretical one: *elm*, *rhythm*, *chasm*, *schism* are representatives of considerable classes of English words, but in none of them has the *m* inherited a title to syllabic value, by being the phonetic remnant of an English syllable that once contained a vowel before the *m*; accordingly, while illiterate speakers not seldom make of the *m* an additional syllable, we who are instructed accustom ourselves to force it into combination with the preceding consonants, as the French treat their *r* and *l* in the words cited above. This is the easier, inasmuch as, on the one hand, the *m* never so occurs after mutes, but only after partially open letters; and as, on the other hand, we have reached in the nasals the lowest degree of vocalic capacity. There are words—of which *heaven* is the most familiar instance—in which, after a fricative, even *n* is treated by us sometimes as a separate syllable, and sometimes as a part of the preceding syllable.

In the class of sounds of the next degree of closure, the sibilants, the line which separates the possibly vocalic from the invariably consonantal is already passed. The sibilants are letters whose mode of formation allows of their easy and frequent prefixion and affixion to other consonants, of every class, while yet they are too little open and sonorous to make upon the ear the impression of a syllable, even when separated from a vowel by full contact-letters. Thus, in *tacks*, *adax*, *eggs*, *stain²*, *skein*, *such* (*sut-sh*), *budge* (*bud-zh*), whatever force and quantity we may give the hissing sound, we feel no impulse to recognize in it a vowel quality, and to estimate the words as dissyllables. The *l* of *draggled* is just as distinctly a vowel as the *e* of *draggeth*, but nothing that we can do will confer the same value on the *s* of *thou drag'st*, though its position, between two mutes, is the most favorable that can be devised for the development of vocalic capacity.* As for the closer spirants, *v*, *th*, *γ*, they exhibit no trace whatever of any such capacity.

If, then, certain of the vowels need only to be abbreviated in utterance in order to take on a consonantal character, and if certain of the consonants are capable of performing, under favoring circumstances, the most essential and distinctive office of the vowels, I see not how it can be claimed with justice that vowels and consonants are two separate and independent systems of articulate sounds, the combinations of which produce words, or even two absolute divisions of the general alphabetical system, to be treated apart, and arranged and classified

* Yet by a remarkable exception, it is claimed that in two Chinese words, *ss* and *tsz*, the *z* is obliged to perform the part of a vowel. See Lepsius's *Standard Alphabet* (second edition), p. 48, note.

without reference to each other. It seems necessary to find some definition of vowel and consonant which shall take due account of and explain these facts, and some mode of arrangement of the alphabet which shall exhibit the relations they imply.

To the same conclusion we are led by a consideration of the insufficiency of the definitions ordinarily given by phonologists of these two classes of sounds. To Prof. Max Muller, for instance (Lectures, second series, third lecture; p. 139 of the American edition), while all vowels are tones, all consonants are mere noises. Of the latter he speaks as follows: "All consonants fall under the category of noises. If we watch any musical instruments, we can easily perceive that their sounds are always preceded by certain noises, arising from the first impulses imparted to the air before it can produce really musical sensations. We hear the puffing and panting of the siren, the scratching of the violin, the hammering of the piano-forte, the spitting of the flute. The same in speaking. If we send out our breath, whether vocalized or not, we hear the rushing out, the momentary breathing, the impulse produced by the inner air as it reaches the outer."

This exposition possesses no more than the semblance of a meaning, if even that; it is worth nothing as affording an explanation of the character of a consonant, or even as helping us better to realize that character. To compare consonants, those essential and highly characteristic parts of our articulated speech, with the unmusical noises of musical instruments, made more or less conspicuous according to the skill of the player, and overborne and silenced altogether in good musical execution, is palpably futile. What is there in the *b* and *l*, the *n* and *d*, of *blend*, for instance, to assimilate them to such noises? Are they, or any other of the twenty or thirty consonants which may gather in groups, even to the number of five or six, about each one of the vowels, in the least degree dependent for their being on the latter, or generated by it? Is not each one as distinct a product of the voluntary action of the articulating organs, consciously directed to its production, as is any vowel? Is there any difficulty in uttering a clear vowel, free from such prefatory or sequent appendages? And are those sounds entitled to the appellation of noises only, as distinguished from tones, which can themselves be musically intoned? There is not a sonant consonant in the system to which a tune cannot be sung, without help from vowels; we are in the constant habit of "humming" a melody, as we call it, which is only singing it to a prolonged *m*; and an *l* or an *r* may be hardly less easily sung, and with hardly more perceptible friction of the escaping air against the mouth organs, than an *i* or an *u*. The asserted analogy fails of application in every particular.

I have already expressed my regret that Prof. Lepsius has not taken occasion, either in his Standard Alphabet or in his letter respecting it, to give his own view of what makes consonants and what vowels, and why they are to be regarded as forming independent systems. He would unquestionably have given us something far better than the unmeaning comparison cited above. Yet I must confess my inability to see how he would have set about furnishing a solid foundation to his opinion. We may conjecture that he would have put forth some such

definition of a consonant as that furnished by Dr. Brücke (in his *Grundzüge der Physiologie und Systematik der Sprachlaute*, Wien, 1856, at p. 29). No phonetic investigator of the present time is entitled to more respect and confidence than this gentleman, nor should we naturally look for a satisfactory determination of the matter here in question from any other sooner than from him. His account of it is as follows: "In all consonants, there takes place somewhere in the mouth-canal a closure, or a contraction which gives rise to a plainly audible and self-subsistent rustling, which is independent of the tone of the voice; while in the vowels neither of these two things is the case."

To the correctness of this statement less exception is to be taken than to its character as a sufficient definition. It appears to me hardly to possess a right to be regarded as a definition: it is rather a specification—a specification of the two principal sub-classes into which consonants are divided, and a description of their respective characteristics. Some consonants, it declares, are formed by a complete closure of the mouth-organs, others by such an approximation of them as produces an audible rustling. This specification, however, does not appear quite exhaustive. In the sub-class produced by closure are included sounds as different as mutes and nasals (or "resonants," as Dr. Brücke, with much reason, prefers to call them); the latter implying, indeed, a closure of the mouth, but combining with this an unclosure of the nasal passages, in such wise as to give a very different character as consonants to the sounds produced. It might have been better, then, to specify the three sub-classes of mutes, fricatives, and resonants, as joint constituents of the class of consonants. And our account of the alphabetic system would be of this sort: sounds possessing such and such and such characteristics, of three kinds, are consonants; the rest, not possessing any of them, are vowels. Is not this a superficial account of the matter? Does it give us any common characteristic as belonging to our consonantal subdivisions, combining them into a class together, and distinguishing them from the vowels? Why do we set up the vowels as a distinct grand division of the alphabet, and not as well, for instance, the mutes; saying, The alphabet is divided into mutes and non-mutes; the non-mutes being continuable sounds, and accompanied with the expulsion of breath, through either the lips or the nose; the mutes implying the closure of both, and being explosive only? If it be replied, that the distinction of vowels and consonants is shown by universal linguistic usage to be one of primary and fundamental consequence, the construction of an important phonetic unity, the syllable, depending upon it, we should retort by alleging the difficulties already shown to beset the distinction of the two classes upon this basis: that *i* and *u*, vowels, are convertible into *y* and *w*, consonants; that *r*, *l*, *n*, and so on, are sometimes vowels, and not consonants. We might even claim it as questionable whether *l*, and *r* when untrilled, are full fricatives; whether they do not come quite as near to being tone-letters, like the vowels, as letters whose essential element is a rustling, such as is plainly and incontrovertibly heard in *z* and *s*, in *v* and *f*. Out of which of all these difficulties are we helped by Dr. Brücke's definition of a consonant?

It seems to me evident that, in order to avoid such difficulties, we need a definition of a consonant, a determination of its relation to a vowel, of a different character from any heretofore given. We do not need to supersede or alter any of the definitions of single sounds, or even of the principal groups of sounds, already prevailing: we only want to find the tie which unites these into more comprehensive classes, and the principle on which the whole alphabet of articulated products may be arranged as a single system, with the connection of its parts duly set forth. Nor can I think the principle difficult to find, nor, when found, of doubtful application.

This needed principle is the antithesis of material and form, the respective part played in the production of the different alphabetic sounds by the organs of the lungs and throat, which produce the vibrating column of air, the tone or breath, and by the organs of the mouth, which modify this tone, giving it various individuality. The different groups have their limits determined by the different degree of action of the mouth-organs upon the throat-product—in other words, by the different degree of closure of the former. If the throat-product be given forth with all the freedom and purity of which it is capable, the mouth being set wide open, so that none of its parts stand in the way of the sonant expiration otherwise than as our physical structure renders unavoidably necessary, the tone produced is *a* (in *far*). This is the true description of *a* as a constituent of the spoken alphabet: *a* is the simplest and purest tone-sound which, in virtue of its peculiar structure, the human throat brings forth. To determine the fundamental and secondary vibrations which give to *a* its acoustic character, to ascertain the length of pipe, or the degree of orificial closure, needful to generate it when the tones of the human throat are imitated by means of artificial constructions—these and other like investigations have, it is true, a high theoretic interest, while yet, in their bearing upon linguistic phonology, they are only of subordinate consequence: sounds are produced for the purposes of human speech by the voluntary efforts of human organs, and are to be estimated and classified according to those efforts.

If, now, we go on to modify this pure sound by the action of the mouth-organs, we find at once that we can and do produce certain series of related sounds by different degrees of the same kind of modification. When, for instance, after pronouncing *a*, we round and protrude the lips a very little, the sound becomes *o* (in *all, awe*). By rounding them a little more closely, we convert the tone into *o*; and if the approximation is made quite a near one, we give utterance to an *u* (in *rule, fool*). There is really an infinite number of sounds intermediate between *a* and *u*, made by infinitely varying degrees of approximation of the lips (not, perhaps, without auxiliary motions at the back part of the mouth, the orifice of the throat—at least it is possible to make tolerable imitations of these vowels by tongue-motions alone, the lips remaining unchanged in position—but these are of secondary importance, concomitants and consequences of the lip action, which alone is consciously performed); and some of these infinite possibilities become realized in the varying utterance, in different languages or within the

limits of the same language, of the three we have noticed; yet the latter constitute practically the series of "labial vowels"—as they are denominated, from the organs principally instrumental in their production. The *u* is the closest tone-sound which we can make by labial approximation; however closely we may press the lips toward one another, the vowel generated is still *u*, until they actually touch, when, if their contact be made so loosely that we can still force out the intonated breath between them, we utter a *v*—a *v*, it is true, of a somewhat different kind from our common one, in pronouncing which we press the upper teeth upon the lower lips, but one which is only slightly distinguished from this, and which is found in German, for instance, as a regular constituent of the spoken alphabet. In this sound, the tone or throat-product is no longer the main audible element; but, rather, the friction of the escaping column of intonated air against the edges of the obstacles that so nearly confine it: the form has become more important than the material. So decidedly is this the case that, even if the tone be altogether withdrawn, and mere unintonated breath expelled, the friction is still distinctly audible, sufficiently so to be capable of use in spoken language, as one of the products of the articulating organs: we call it the letter *f*. It was not so with the vowels *a*, *q*, *o*, *u*: expulsion of unintonated breath through the four apertures of the mouth-organs by which these were uttered did not give four employable articulate sounds; it gave only a single uncharacterized aspiration, or breathing. But the labial interference may be carried one step farther, to complete closure; then, of course, there is no longer any expulsion of breath; there is neither tone nor friction to make a perceptible sound; there is silence: sound is produced only as the contact is broken, and a fricative or tone-sound follows: but the breach itself forms an appreciable element of articulation, and we reckon it as a *p*; or as a *b*, if it be momentarily preceded by an extrusion of intonated^{""} breath from the throat into the closed cavity of the mouth.

Here, at last, we have evidently reached the limit of possible modifying action of the labial organs of the mouth upon the pure tone or throat-product. By their gradually increased interference we have obtained the series of sounds *a*, *q*, *o*, *u*, *v-f*, *b-p*. It may be called the labial series.

Another similar series is produced by the gradual approximation of other organs, at another point in the mouth. If, from the position in which *a* is uttered, the upper flat surface of the middle part of the tongue be slightly raised toward the roof the mouth, in its highest portion and farther back, successive degrees of elevation and approach will give us the vowels *q* (in *fat*), *e* (in *they*), *i* (in *pique*). The accompanying closure of the jaws and lips is here absolutely unessential, and does not contribute to the characterization of the sounds; it is made merely for the convenience of the tongue, helping its access to the palate. The closest sound with predominating tone producible by this method is *i*; a next further degree of approximation gives birth to a pair of fricatives, the German *ch* in *ich*, *pech*, etc., and its corresponding intonate, which is a very rare alphabetic constituent: Prof. Lepsius writes them with *x* and *γ*. Then follow, by complete closure, the into-

nated and unintonated mutes *g* and *k*. Thus we have a series which we may call palatal, composed of *a, æ, e, i, γ-x, y-k*.

Now I maintain that these two are real series throughout, and that no schematic arrangement of the alphabet can be accepted as complete which does not represent them as such. They are wont to be so presented, as far as to the limits *u* and *i* respectively, in the now well-known vowel-triangle or pyramid. But why stop at these limits? As regards their articulation, there is no greater difference between *i* and *γ*, between *u* and *v*, than between *i* and *e*, *u* and *o*; not so great as between either *i* or *u* and *a*. It is true that the vowel-pyramid faithfully represents a fact, and one of prime consequence in phonology and in linguistic history. But this is not the only fact that we have to regard in laying out the system of spoken sounds. It is true that, in passing from *i* to *γ*, or from *u* to *v*, we have to cross an important and well-marked division line. But it is not on that account anything more than a division line in a series, like the equally well-marked line which parts the classes of fricative sounds from the mutes. It is a line representing the undeniable truth that, with the same organs, approximation short of a certain degree produces vowels, and beyond a certain degree produces consonants—and this is not less a conjunctive than a disjunctive difference; while it holds the two classes apart, it at the same time binds them together into one system. The vowels are the opener sounds in the system, of varying degrees of openness, yet all showing a preponderance of tone over its modification, of material over form: the consonants are the closer sounds in the system; also of varying degrees of closeness, and thereby divided into classes; but all of them sounds of the mouth-organs rather than of the throat, the modification or form prevailing in them over the material. Vowels and consonants, then, are the opposite poles of a series; not divided and dissimilar kinds of sounds, but passing into one another, and separated by a border-land of doubtful belongings.

Besides the two series, composed of vowels and consonants, which have already been described in detail, the ordinary alphabets contain another, including consonants only. It is produced by the tip of the tongue, seeking approach and contact with the roof of the mouth in its forward part. If the tongue be turned upward at its point, and brought toward the parts at or behind the upper front gums, no series of gradually changing tone-sounds is brought forth: the only vowel heard is the neutral vowel (*u* in *burn*), until the approximation of the organs is close enough to generate the *r*—which, as has been explained above (note 8, p. 341), may be either trilled or left smooth. The next degree of approach, at the same place and with the same organs, gives rise to a fricative sound, a *z* (or, if far enough back in the mouth, a *zh*), in which the friction or buzzing is very conspicuous, and which has, like *v* and *γ*, its unintonated counterpart, *s*. One more degree of closure gives a complete stoppage of the voice, and produces the pair of sounds *d* and *t*, full mutes, like *g* and *k*, *b* and *p*. By a peculiar condition of things, now, while the tip of the tongue generates no vowels, it generates two different sounds of its own openest class: namely, the *r*, produced by an opening of a certain aperture between itself and the roof

of the mouth, and an *l*, produced by a closure at the tip and an opening at the sides of the tongue. The ready convertibility of these two sounds, *r* and *l*, in the history of language, is a well-known fact, nor would any one think of putting them into different classes. Though not vowels, they are also not properly fricatives: they are the openest, most resonant, and most continuable, of all the consonantal sounds; they have not, like the sonant fricatives and mutes, their surd counterparts, employable with equal frequency and freedom for the uses of articulate speech. Whether, in their production, the part taken by the throat or by the mouth-organs should be regarded as predominant, seems to me a debatable question: I should not dare to say with confidence whether there is in them more tone or more form. No name is so applicable to them as that of *semivowels*, by which they are also most frequently called: they do, in fact, stand as nearly as possible upon the line of division between vowels and consonants. Hence their capacity of employment as vowels, and their frequent use in that character, as has been sufficiently pointed out above.

There is another important class of sounds, the nasals, whose relations to the other classes, and consequent position in the alphabetic system, require a few words of explanation. As regards the position assumed by the mouth-organs in their utterance, they stand upon the footing of full mutes, the closure of the oral passage being complete. They are far, however, from being mute sounds, because in pronouncing them the nasal passages are opened, and this circumstance gives them no small degree of openness, resonance, and continuability. They constitute, then, a peculiar class, and their place in the scheme of articulate sounds is not to be determined by the position of the mouth-organs only—which would rank them with the mutes—but by their general character. And this evidently places them next the semivowels, before the fricatives; since, as we have already seen, they are capable of employment with the value of vowels, and at least one of them, *n*, is frequently so employed in our language. The same position is assigned them by their incapacity to admit a surd counterpart, by their common relation to the aspiration, the letter *h*. The place and value of this letter in the general alphabet offer an important confirmation of the truth of our method of arranging and classifying the alphabetic sounds. The mutes and fricatives, as we have seen, go in pairs; each sonant letter, produced by an expulsion of intonated breath with the given position of the mouth-organs, has its double, produced by an expulsion of unintonated breath with the same position. In these two classes of sounds, the approximation of the parts of the mouth is sufficient to give a completely individual character even to an emission of air, without tone: they are so far from being tone-sounds, the element of form in them so predominates over that of material, that the material may be changed by the total withdrawal of tone, and what is left is just as much an articulate sound as it was before. An *f* has fully as much right in the alphabet as a *v*, an *s* as a *z*, a *k* as a *g*. This is not the case as regards the other three classes of sounds, the vowels, semivowels, and nasals. An expulsion of mere breath through the three positions, for instance, in which *α*, *ι*, *υ* are uttered, produces, it is true, three different sounds, which are

readily to be distinguished from one another by one who listens and compares them; and yet, the three are not different enough, do not possess sufficient individuality, to have practical value as three sounds for the usages of speech; they count together for but a single articulation, namely the breathing or aspiration, represented by the letter *h*. The *h* is thus an anomalous member of the alphabet. Every other letter represents a distinct position of the organs of the mouth, through which alone it can be uttered; the *h* has no position of its own, but is uttered in that of the following letter. When we say *ha*, there is no shifting of place of the mouth-organs, as we pass from the former to the latter sound; there is merely first an expiration of breath, then of sound, through the open throat. So also when we pronounce *he* or *who*; the position of the tongue by which *i* is uttered, or that of the lips by which *u* is uttered, in those two words respectively, is taken up before the utterance of the *h*, not after it; there is again only a change from breath to sound as the material employed, no change as regards the oral modification to which the material is subjected. In whispering the same syllables, the aspiration is distinguished from the whispered vowels by a like difference of material, by a free emission of air through the relaxed vocal cords, which in the vowel are strained up nearly to the point of sonant vibration. *H*, then, has its place in the alphabet as the common surd of all those sonant letters which are too open to have each its own individual surd. And such are not the vowels only, but also the semivowels and the nasals. We do not in English, it is true, use an aspiration corresponding to all the semivowels and nasals, but we easily can do so, and such aspirations are not unusual in other tongues. We put *h* freely before every vowel, pronouncing it always through the position of the vowel; we also use it before the semivowels *w* and *y*, as in *when* (*hwen*) and *hue* (*hyu*)—where, indeed, it is not perceptibly different from the *h* of *who* (*hu*) and *he* (*hi*); and farther, before *m*, in the interjection *hm!** but no word in our language, so far as I am aware, exhibits the combination of *h* with *l* or *r*.

But it is a farther corollary from our arrangement of the alphabetic system that, the closer the sound, the farther its place from the vowel beginning of the alphabet and toward the mute ending, so much the more distinctly characterized will its corresponding aspiration be, so much the nearer will it come to possessing an independent value and availability. The *h* of *hue* verges very closely upon the German palatal *ch*-sound, in *sich*, *sicher*, etc.; the *h* of *when* is but little removed from an *f* (such as is formed by the lips alone). There are phonetists who maintain that in *when*, as in all other words of the same class, the *w*-sound that originally followed the aspiration (for the etymological history of the words, and the Anglo-Saxon spelling *hw*, leave no room for question by any person that they once began with a semivowel and preceding aspiration) has now become lost, and that only the breathing remains—a breathing of which the character is determined by the for-

* A friend reminds me that some persons are in the habit of using *hm!* instead of *hm!* as "the inarticulate symbol of a sneer," and that young children, learning to speak, often say *hnow*, *hnake*, for *snow*, *snake*, etc.

merly uttered *w*, and which is therefore, in fact, a surd corresponding to the sonant *w*. If this be so, we have in our spoken alphabet a semi-vocalic aspiration which cannot be properly represented by the indifferent letter *h*, but has acquired an independent *status*, and demands an independent sign. That such a thing is phonetically possible no one could presume to deny; for, in the semivowels, we have arrived at a degree of closure of the organs which gives even to the surd utterances a much more distinctly differentiated quality than belongs to the aspirations of the opener vowels; and we might expect to see them appearing sporadically as elements of articulated utterance, even divorced from the sounds which originally called them out. Thus, the de-intonated *r* and *l* of the French words *lettre* and *miracle* and their like, already referred to, are plainly *r* and *l* still, and not breathings merely. And at least one language, the Welsh, has raised a surd *l* to the rank of an independent constituent of the alphabet, by a withdrawal from the *l*, in certain situations, of the intonation which formerly belonged to it. As a matter of fact, however, I am fully convinced that in the class of words now under discussion we do actually pronounce the *w* after its aspiration, and that those who maintain the contrary wrongly apprehend and describe their own utterance. The English spoken alphabet, accordingly, does not possess that rare anomaly, a surd semivowel; its sounds written with *h* in *when* and *hue*, though different in articulation, have no more title to be treated as separate elements, and marked with separate signs, than have the differently articulated breathings represented by *h* in *harp*, *hoop*, and *heap*. *H* is, in English usage, merely the corresponding surd to the vowels, semivowels, and nasals, and its relation to them helps to fix the place of the nasals as next after that of the semivowels in the systematic arrangement of the whole alphabet.

The sounds of which we have treated will, then, when arranged according to their physical character and relations, form the following scheme:

Sonant.		$\left\{ \begin{array}{cccccc} & & & a & & \\ & & & \alpha & & \alpha \\ & & & e & & o \\ & & i & & u & \\ & n & y & r, l & w & m \end{array} \right\}$						Vowels.	
								Semi-vowels.	
								Nasals.	
Surd.	<i>h</i>							Aspiration.	
Sonant.	γ	<i>z</i>		<i>v</i>		} Fricatives.			
Surd.	<i>x</i>	<i>s</i>		<i>f</i>					
Sonant.	<i>g</i>	<i>d</i>		<i>b</i>		} Mutes.			
Surd.	<i>k</i>	<i>t</i>		<i>p</i>					
		Palatal Series.	Lingual Series.		Labial Series.				

I firmly believe that such a scheme exhibits more of the relations, both physical and historical, of the alphabetic sounds, and exhibits them more truly, than any other which can be given, and that by it the spoken alphabets of different languages may be most advantageously

compared and judged. In my former article (*Journ. Am. Or. Soc.*, vii. 324) I have given, upon the same plan, a fuller system, embracing all the consonantal sounds which compose the English alphabet.

Our conclusions may be thus summed up. The fully open *a*, on the one hand, and, on the other hand, the absolutely close and silent consonants *k*, *t*, *p*, are the natural and necessary limits between which the sounds of the alphabet are to be arranged, and arranged in order, according as, in their grade of closeness of the modifying mouth-organs, they more nearly approach the one or the other limit. The opener sounds, in which the tone or material predominates, are called vowels; the closer sounds, in which the modification or form predominates, are called consonants. But this distinction, although the construction of the syllable gives to it a higher practical importance than belongs to any other in the alphabetic system, is not an absolute one: while there are sounds which are and can be nothing but vowels, and others which are and can be nothing but consonants, there are also, on the line between the two classes, some which may have either value, according to their situation. Consonant is a comprehensive name, including at least four different classes of sounds, each capable of exact definition;* but no admissible definition of a consonant is to be set up save the one just given—that it is a closer sound than a vowel. Vowel and consonant are the two opposite poles of a series, in which are included all the articulate sounds ordinarily employed by human beings for the purposes of speech.

* And, in a fuller scheme, like that referred to above, it may be found convenient to divide the class of fricatives into sibilants and spirants.

MISCELLANIES.

I. ON THE ARMENO-TURKISH ALPHABET.

BY REV. ANDREW T. PRATT, M.D.

Presented to the Society Oct. 26th, 1864.

Marash (Turkey), Aug. 20, 1864.

Prof. W. D. WHITNEY,—*Dear Sir* :

It is many months since I read your article on Lepsius's Standard Alphabet, in the Journal of the Oriental Society. The principles upon which it is developed seem to me eminently just and philosophical, and the results, as you draw them out, in a high degree satisfactory. I have been led by the perusal of this article to send you some remarks on the Armeno-Turkish Alphabet, as compared with the Standard. You are doubtless acquainted with this alphabet as used for the original language, but in its application to Turkish it receives some modifications which render it almost perfect as a phonetic representation of that language, and it is in this respect worthy of attention. For example, the letter *q* (*kim*), or *q*, is used in Armenian before any of the vowels; in Turkish it is restricted, as it should be from its guttural nature, to the labial series *a* (*g*), *o*, *u*; and *q* (*ke*), or *k* soft, is used for the other series *e*, *i*, *ö*, *u*. Again, some letters practically superfluous, and not now used in Western Armenian as distinct from each other, though they are distinguished in the Ararat Armenian, are dropped in adapting the alphabet to Turkish—thus *p* (*pen*), as equivalent to *ph* (*pur*), and *q* (*ta*), as equivalent to *ph* (*to*). Some others whose sounds are not used are dropped. And the result is an alphabet with a sign for every sound in the Turkish language (except the Arabic *'ain*, for which a superposed comma is used), and the only infringement of rule is that five or six of these signs are compound; for which it may be offered in justification that the sounds of most of them are also more or less compound.

The Armenian alphabet consists of thirty-eight letters, thirty-one of which are used in Armeno-Turkish. Following the order adopted in your article, we have at the apex of the triangle *w* (*aip*), or *a* as in *father*, in some words extended in the direction of your *o*, without going far enough to need or to have a distinct notation. In the same direction we find next *•* (called *o*), and next *u* (*vo-hün*), or *u*, a graphic diphthong for a simple sound, and thus the greatest anomaly in the

alphabet. Returning to the palatal line of development, we have the place of *ē* left blank, and next meet *ē*, or *e*, and then *h* (*innē*), or *i*. Here, however, is a slight divergence from your norm, and, I cannot help thinking, with some reason; we have between *e* and *i* *ēh*, or *ei*, a compound of the two, and so corresponding to our *ey* in *they*. Now it seems to me that the sounds *e* and *ey* are quite distinct enough, and the latter compound enough, to merit a greater distinction than short and long, if not to be represented by a compound character—to which, I confess, I can see little objection when it is a thoroughly natural one, and each member keeps its distinctive sound. Returning to the intermediate vowels, we have *ē* (*ē*) or *ē*, a well defined sound, not so broad as in our *but*, and rather resembling the French *e* in *de*. Next to that is *ēo* (compound of *e* and *o*), or *o*, and then *hū* (*inni-hūn*), or *ū*, which you will observe is represented very much after your description, as consisting of *i* and *u*—and, as I think, rightly; and here let me say (as you do not seem to state distinctly) that it appears to me that *o*, as used here at least, bears very much the same relation to *e* and *o* that *ū* does to *i* and *u*: i. e., the position of the organs in the production of *o* is intermediate between *e* and *o* in the same manner as *ū* is between *i* and *u*. And so it should be, if the theory of the vowel-sounds (as I think it is) is correct; otherwise *o* is unexplained. This being so, it is philosophical in the Armenian alphabet so to represent the sound. Of vowel sounds, there remains in this palatal branch the compound of its two extremes, *i* as in *pine*; represented normally by *uy* (*aip-hi*), or *ay*. The corresponding compound of the labial branch, *au*, is not found in Turkish, nor is the sound *oi*, as in *join*.

Following down the line of the palatal series, we have *h* (*yec*) and *h* (*hi*), or *y*, which seems to introduce the anomaly of two characters for one sound. The latter letter, however, which is in Armenian double in character—i. e., as an initial *h* and as a final *y* (compare *Heisus* for Arabic *Yesua*)—is used in Turkish only in the diphthongs above-mentioned, and for euphonic purposes in inflection, to separate vowels from one another; while the other is the *y* for the ordinary use of the language. The *ñ* is represented by *hū* (*nu-gen*), *h* by *h* (*ho*), the Semitic strong *h* being, by the universal tendency of the Turkish at the present day, softened, as is the 'ain, and not distinguished in pronunciation, as it is not in our alphabet. For the rest we have *h* (*že*) *ž*, *h* (*ša*) *š*—the *γ*, if I understand it, is wanting, and the *χ* also, unless, which I will assume, it is *h* (*khe*), the Arabic *kh*. Next is *h* (*gen*), or *g*, *h* (*ke*), or *k*, *h* (*je*), or *j*, *h* (*ce*), or *c*, in the palatal line; and, in the lingual, *h* (*re*), or *r*, *h* (*lun*), or *l*, *h* (*nū*), or *n*, *h* (*za*), or *z*, and *h* (*se*), or *s*. The lingual spirants are wanting in Turkish; e. g. the Arabic name Othman, of which we make Ottoman, changing the spirant *th* to the mute *t*, has become in Turkish Osman, its spirant being converted into a sibilant. Below this, *h* (*dūn*), or *d*, and *h* (*ta*), or *t*, complete the lingual series.

The labial series wants the *w*, and has next *u* (*men*), or *m*, *u* (*vav*), or *v*, *ph* (*fe*), or *f*, *u* (*be*), or *b*, and *ph* (*pür*), or *p*. There remain two letters—the gutturals *q* (*kim*), or *q*, Arabic *ق*, which, however, in practice, is much softened from the Arabic—and *q* (*ghad*), Arabic *ghain*, for which your article does not give Prof. Lepsius's sign—it might be *g* perhaps.

To give at one view the Armeno-Turkish alphabet, I construct a skeleton after the model of the one in your article :

Palatal Series.	$\begin{matrix} u \\ j \end{matrix}$	$\begin{matrix} u \\ l \\ o \\ h \\ l \\ l \\ u \\ q \\ p \\ x \\ z \end{matrix}$	Linguist Series.	$\begin{matrix} u \\ l \\ o \\ h \\ l \\ l \\ u \\ q \\ p \\ x \\ z \end{matrix}$	Labial Series.	$\begin{matrix} u \\ l \\ o \\ h \\ l \\ l \\ u \\ q \\ p \\ x \\ z \end{matrix}$	
							Vowels.
							Semivowels.
							Nasals.
							Aspiration.
							Sibilants.
							Spirants.
							Mutes.
							Compound.

From the above survey, it appears that the Armeno-Turkish alphabet needs little emendation to bring it within the requirements of a true phonetic alphabet. Each character has its distinct single sound, no more varied than the space (which, as you well remark, rather than a point, each letter must be conceived to represent) naturally admits; and the compound characters are hardly more numerous than the compound sounds—the *u* and *h* being the only exceptions. Certainly, for the purposes of the learner, it is infinitely superior to the Arabic, with its undeterminable pronunciation, or the Greek, with its cumbersome diacritical points, when they are used for the Turkish language. When once it is mastered, the pronunciation of any written word is easy—subject, of course, to that ear-practice without which no foreign language can ever be well pronounced.

I trust that you may find some points of interest in this survey of the Armeno-Turkish alphabet—or at least it may serve as a testimony of my interest in your article in the *Journal of the American Oriental Society*.

II. BRAHMANICAL INSCRIPTIONS IN BUDDHISTIC TEMPLES IN SIAM.

BY A. BASTIAN, M.D.

Presented to the Society Oct. 26, 1864.

Buddhism in Siam is affected by a mixture with Brahmanism, although not to such an extent as appears formerly to have been the case in Java. Still there are traces to show an early influence of the Brahmans on the Thai races, as it has been more recently observed upon the Manipureans and the most of the tribes in the Assam valley. In Burmah one finds often little temples of local deities or Nats, connected with the Buddhistic monasteries, similar to the Dewalas in Ceylon; but the functions of the Brahmans, the so-called court Brahmans or royal magicians, are for the greater part only exercised inside the precincts of the palace and limited to them; whereas in Siam they preside at and conduct all the public festivals of a political and agricultural character. They exercise a still greater influence in Cambodia, the center of an ancient civilization, as shown by the newly discovered monuments there. According to the Siamese "History of the Northern Towns" (*chongsavadan miang nua*), Savanthevalok or Sangkhalok, the most ancient town, was founded by the descendants of Mokhala and Saribut, the chief disciples of Buddha, on the advice of two Brahmans, called Satxanalai and Sitthimongkhon. The lately revised edition of the history (under the superintendence of the present king himself) speaks of five Brahmanical races or tribes, called Adan, Vayathuk, Ramեսuen, Thesaratri, and Phiri, who came from the country of Ramarat, and brought with them the sciences of letters and numbers, to instruct the Sayam nation (Siamese) and regulate the social institutions. A Brahmanical professor whom I consulted about it, here in Bangkok, spoke of eight (another of ten) families of Brahmans, but had only reference to a modern emigration, happening under king Narai of Ramarath, who, hearing that another four-armed monster* was reigning in Sri-Ayuthia, sent him the image of Phra-Inswen (Siva) and other deities, which are now preserved in the Brahmanical temple of Bangkok.

Amongst the pictures adorning the walls of one of the Vat (Buddhistic monasteries) in Bangkok, called Vat Suthat, I found the drawings of some of these Brahmans (Phrahmana), with explanatory inscriptions, of which the following are specimens:

I. "This is the figure of a Phrahm (Phrahmana or Brahman), belonging to the tribe (race) Vaiyathuk, who lived originally in the town of Ramarath (Ramaratta, or city of Rama). They wear the hair bound up in a knot behind. They dress in white garments, and are skillful to arrange the twelve festivals and ceremonies of all kinds, using the Vitsanu-Mon (a *mon* or *mantra*). They worship Phra-Naray (Naraya-

* Vishnu or Narayana is nearly always represented with a plurality of arms (according to his different avatars),

na or Vishnu) as the Lord, as the highest One in the world. And the four races of Phrahm, that is, the race of Ramahet, the race of Phe-sankri, the race of Vaiyathuk, the race of Phiri, use to carry shells and long beaked jars to pour out the water, consecrated by the Saiya-Mon, in sprinkling people, to liberate them from misfortunes. Some blow the shells and beat the sonorous wood, others play on the drums in melodious concert, to spread glory in the dwellings of men."

II. "This is the figure of a Phrahm of the race Phi-Ramarath, deriving its origin from the town Ramarath. They wear the hair in a high pointed knot on the middle of the head, resembling the (pointed cap called) *xadinmonxada*, and then wind the cloth of a costly turban round it. They dress only in white garments to adorn themselves. They know the Sinlaprasat (magical or natural sciences), being expert in the Vethanghasat-Pakon and the Xatxu-Vethasat, and use the Iswen-Mon (*mantra* of Siva) for the Vitthi-Sai. They observe different festivals, as for instance the Thavathot-Phitthi (the twelve monthly festivals of the year). They worship Phra-Inswen as the Lord, declaring him to excel in the world."

III. "This is the figure of a Phrahm, belonging to the Phiri race, called Nalivan in popular talk. They lived originally in the town (country) of Ramarath (Ayuthia, the old capital of King Rama of the solar race in northwestern India). They wear the hair falling down on the shoulders, the head wound round with costly clothes, as a turban, over equal lines of hair pulled out. They are expert in the Trai-Phet (three Vedas), and dress handsomely in white clothes. They understand the arrangements of the different festivals. They worship Phra-Uma-Phakhavadi (Bhagava, as the spouse of Siva), as the supreme deity of the world. And the five races of Phrahm, spoken of here, are in the habit of inserting ornamental rings in the ears and on the fingers. They hang rosaries on their necks, after the manner of Dabot (hermits).* On the upper arm of the right side they tie the Phrot (inscribed with mystical characters). They wear the string Thuram over the shoulder. During the time they celebrate festivals, they eat neither deer nor fishes, but take only fruits of the trees and sesame-seeds for their nourishment."

The books of the Brahmans, mostly consisting in the text-books of the festivals (*kamphi phitthi*), are written in a kind of Devanagari character, which, although it is read, is not now understood by the Brahmans settled in Siam. They are collectively called Kamphi Saiyasat, and include the here so-called Vethang or Vedas.

One of the Brahmans, whom I questioned about the affairs relating to his race, said I should find a full account of the Brahmans in a book he gave me. This proved to be the deposition, taken down on royal order, of a Brahman, probably a begging Fakir, who some years ago (1830) had arrived in Bangkok from Benares. It begins thus :

* The Dabot are generally identical with the Rusi, or hermits, but sometimes refer to a kind of Pratyeka-Buddha. In Japan, large images of Shakia (Sakyamu-ni) are called Dai-but, as for instance in the old capital of Kamakura, and explained in the language of the country to mean the great (*dai*) Budh or Buddha.

"On Monday, in the tenth month; the eleventh night of wane, at the era dating 1192, the year of the tiger, the second of the cycle; the nobles Phra-Amoramoli, Luang Nontheb, Chao Tha Phrahmana, and Nai Hong sat down together to interrogate the Brahman called Achuta, who gave the following account:

'I was born in the town of Pharanasi (Benares). My father bore the name of Yethariya. He was a Phrahmana-Theva-Phrahm, of a family belonging to the Vasistha tribe, out of which the royal teachers are furnished. I had to do the royal work, together with my father, and got monthly fifty rupees. Of Hindus, there are in the town Pharanasi ten family tribes: 1, the Larati-krakun (krakun or family) of the Pharathavaxa-khotr (khota or race); 2, the Arayan-krakun of the Khavaka-khotr; 3, the Mahratha-krakun of the Samati-khotr; 4, the Tetangkha-krakun of the Mani-khotr; 5, the Thinadara-krakun of the Naratha-khotr. These five family tribes are of a sinful race, as they eat flesh and fish. Then there are, 1, the Sarasut-krakun of the Vasistha-khotr; 2, the Kamakabutta-krakun of the Kosiya-khotr; 3, the Koma-krakun of the Bunlasati-khotr; 4, the Maithen-krakun of the Samittat-khotr; 5, the Uthakanta-krakun of the Khotama-khotr (the race of Gautama). These five family races form the Phrahmana-Theva-Phrahma-krakun. They observe the five precepts continually, and do not eat flesh, nor anything which has life, living only on milk, butter, beans, and grain. They cook their own rice. Those who are not comprised in these five tribes of Brahmans are called Hindu. Because these tribes excel above all others, they are called Phrahmana-Theva-Phrahma-krakun (the Brahmans of the family of the god Brahma). They worship Phra-khodom (Sommana-kodom or Gautama), and hold him in reverence above any other Thevada. In celebrating festivals, they make offerings to Phra-khodom first, and then to Phra-Iswen and Phra-Narai (Narayana or Vishnu). The Sanskrit language is esteemed very highly. In addressing his Majesty the king, only Sanskrit words must be used. The holy books of the Trai-Pidok, called Phuttha-Sastrani, are not written on leaves, but in paper books.'

The report goes on then to speak about the monthly festivals, and that whoever wishes to be buried in the town of Pharanasi (from whence he will go straight to heaven) has to pay thirty rupees to the king. After a description of the holy places of Buddha at Khaiya (Gaya), the Brahman continues, that the names of all the orthodox kings were inscribed there, and that lately only Padungpu, king of Angva (Ava),* had sent an embassy, but that the name of the king of Siam was wanting still. He was therefore sent by Uthitchanarai, king of Khaya, a relative and dependent of the king of Pharanasi, to see how it stood about the town of Ayuthia, founded by Rama on his return from Langka (Ceylon). The first mention made of the English (Ang-kris) during the overland voyage occurs on the Brahman's arrival at Yakaiya (Arrakan).

* An account of which is to be found in the Asiatic Researches, contributed by Colonel Burney, who at that time lived in Burmah, as the English Resident.

III. ON THE ASSYRO-PSEUDO-SESOSTRIS.

BY HYDE CLARKE, ESQ., OF SMYRNA,
President of the Academy of Anatolia, etc., etc.

Presented to the Society Oct. 12, 1865.

The rock-cut monuments of Asia Minor were matters of remark to the father of history, Herodotus. In his second book he assigns them to Sesostris, king of Egypt :

"The pillars which Sesostris erected in the conquered countries, have for the most part disappeared, but in the part of Syria called Palestine, I myself saw them still standing, with the writing above-mentioned, and the emblem distinctly visible. In Ionia also, there are two representations of this prince engraved upon rocks, one on the road from Ephesus to Phocæa, the other between Sardis and Smyrna. In each case the figure is that of a man, four cubits and a span high, with a spear in his right hand and a bow in his left, the rest of his costume being likewise half Egyptian, half Ethiopian. There is an inscription across the breast from shoulder to shoulder, in the sacred character of Egypt, which says, 'With my own shoulders I conquered this land.' The conqueror does not tell who he is, or whence he comes, though elsewhere Sesostris records these facts. Hence it has been imagined by some of those who have seen these forms, that they are figures of Memnon; but such as think so err very widely from the truth."—Herodotus, Book II., chapter 106, Rawlinson's translation.

He depicts very closely a monument on the road from Sardis to Smyrna, which has been identified with a monument near Nymphæum, Herodotus, however, placing the lance and bow in reverse hands.

This monument, on the evidence of the Egyptians, he attributes to Sesostris, and relates that it is a monument of his victories. Diodorus Siculus give a relation to the like effect.

Thus the monument near Nymphæum or Ninfi, sixteen miles from Smyrna, has been regarded as Egyptian, and called the *Sesostris*. It is, however, very doubtful whether Herodotus had seen this monument. His language implies that he had seen a monument in Syria, and he only relates the fact that there are two monuments in Ionia. Thus his evidence is not that of an eye-witness, and he becomes the instrument for connecting with this monument an Egyptian fable. This does not diminish the antiquity of the monument, nor does it remain in dispute that this is the one which was recorded by Herodotus.

Kiepert, the traveller and geographer, seems to have been the first to challenge the character of the monument, and both he and Carl Ritter designated it the Pseudo-Sesostris, and classed it with the Assyrian remains of Asia Minor. Lepsius, however, overbore the challengers, and maintained that it was Egyptian, but of Rhameses.

On examining the monument, in which I was accompanied by the Prussian expedition under Professor Strack of Berlin, I was convinced that it was not Egyptian of the types alleged, but was of Assyrian character, in which my companions concurred.

From that time I have been in correspondence with competent authorities for the solution of the question, but so few persons have visited

Nymphæum, and the drawings are so defective, that it is difficult to arrive at a decisive determination. Latterly I have been making efforts to get the Sesostris photographed, which I at length succeeded in getting Mr. Svoboda to effect. Mr. Alexander Svoboda was the first to photograph the caves of Elephanta in Bombay, the monument of Ctesiphon in Mesopotamia, and the monuments of Ephesus. He had great difficulties to overcome, but, as the Society will see, he has succeeded, and produced a photograph which reproduces the lineaments of this remarkable record.*

Its present condition can here be seen as distinctly as the friable nature of the rock has allowed the contours to be preserved.

From this it will be observed that it is wanting in the characteristics of Egyptian monuments, nor is there any reason to believe that it accomplishes the purposes assigned by Herodotus. It is not on the high road from Sardis to Smyrna, but off the high road, in an obscure valley, where the supposed objects of Sesostris in recording his conquest of the country would not have been effected. It is only a local record, or object of local worship, like the neighboring Niobe or Cybele on the road to Magnesia and Sipylum.

It most distinctly resembles the sculptures of Pterium and others of that type, and is perhaps to be classed with them, not as distinctly Assyrian, but as of an allied class, Assyrian in its general features, but not distinctly belonging to the main group of Assyrian.

In eliminating the Egyptians from the historical field, we are not in a position to decide as to the people or the epoch to which the Pseudo-Sesostris belongs. Indeed, the progress of historical investigations, while dissipating error, presents new reasons for doubt.

From the late investigations of myself and others, we now find the following among other elements of the prehistorical and historical epochs of Asia Minor: the Kaukaso-Tibetans, the Iberians, the Indo-Europeans (the Armenians, Koords, Persians, and Hellenes), and the Semitic races.

Considering that in the time of Herodotus only three of these monuments were known in western Asia Minor—namely, the two Pseudo-Sesostrises and the Niobe of Homer—we must conclude that, as they were not objects obnoxious to the people and had been preserved, they must in previous times have been rare, and that consequently they belonged to some local kingdom under a Semitic prince.

With regard to the other Pseudo-Sesostris in Ionia, recorded by Herodotus as on the road from Ephesus to Phocæa, I am of the opinion that it must have existed on the precipitous cliffs and rocks under Kechi Kalessi, or Goat and Castle, above the plain of the Cayster, between the Ephesus and Kosboonar stations of the Ottoman Smyrna and Aidin railway. These localities have from the plain the appearance of having possessed rock-cut pictures, and are well deserving of examination.

* The copy of Mr. Svoboda's very interesting and valuable photograph, sent by Mr. Clarke, appears to us to bear out fully the latter gentleman's estimate of the monument, as lacking the character of Egyptian art. The representation of it given in Rawlinson's Herodotus (vol. ii., p. 174) is by no means accurate, either in details or in the general impression made.—*COMM. OF PUBL.*

For the monument near Nymphæum I propose the name of Assyro-Pseudo-Sesostris, so as to preserve the legend of Herodotus, and at the same time to distinguish its class.

It is worthy of remark that the nearest Assyrian monuments accessible to the West are in the immediate neighborhood of Smyrna, and that they must possess an antiquity of some three thousand years at least.

Smyrna, June 17th, 1865.

IV. REPLY TO THE STRICTURES OF PROF. WEBER UPON AN ESSAY RESPECTING THE ASTERISMAL SYSTEM OF THE HINDUS, ARABS, AND CHINESE.

BY PROF. W. D. WHITNEY.

Presented to the Society Oct. 11, 1865.

Prof. Weber of Berlin, in the ninth volume of his *Indische Studien* (pp. 424-59), has replied to my review and criticism, published in the first part of the eighth volume of the Society's Journal (above, pp. 1-92), of his opinions touching the character and origin of the Hindu, Chinese, and Arab systems of lunar asterisms. Although his paper has an interest and bearing chiefly personal, hardly changing at all the scientific aspect of the questions discussed, I am not willing to let it pass altogether without rejoinder, since it charges upon me a misrepresentation of his views and arguments in certain respects; and especially since, in at least one important respect, I am obliged to confess the charge well founded, and have to excuse and apologize for my error.

In my former paper, namely, I ascribed to Prof. Weber the confident belief that the Chinese and Arab systems were, both of them, immediately derived from the Hindu. Herein, as must be frankly acknowledged, I misstated the position held by him as to the Chinese system, treating as a positive dogma what he presented only as a questionable, though probable, theory. This was an oversight on my part which I much regret, and which justly exposes me to censure. But I may, I think, be allowed to plead, in mitigation of my offense, that I have not, after all, done Prof. Weber's argument any real injustice—nay, that I have even done it better justice than it receives at his own hands. His most important thesis, with the establishment of which his second essay is chiefly occupied, is this: that "the *sieu*, in respect of order, number, identity of limiting stars, and inequality of distance, correspond to one of the most modern phases of the Hindu *nakshatras*, prior to which these latter have their own peculiar history of development." (Essays on the *Nakshatras*, i. 285.) Now if this thesis is proved, as Prof. Weber claims, I see not how he or any one else can for a moment hesitate to believe that the *sieu* are a derivation from the *nakshatras*. If

an institution has passed through a succession of phases in the hands of one nation, and is found in the possession of another in a form corresponding with the last of those phases, it must be very positive and unequivocal evidence which shall have the right to convince us that the latter nation did not borrow it from the former at the end of its history of changes. But the opposing considerations which Prof. Weber suffers so to weaken in his mind the force of his own argument that he is afraid to adopt its legitimate conclusion, are really of no weight whatever as opposed to it: they are, in part, "the incongruencies upon which Biot lays such stress"—which incongruencies, as I have shown in my former essay, have no existence save in Biot's misapprehensions of the Hindu system—and, in part, correspondences and differences among the members of the three systems which would be without difficulty reconcilable with the theory of derivation from India to China, if only there were to be found elsewhere reasons for believing in the fact of such derivation. I do not see, therefore, that any of my counter-argumentation is rendered unnecessary by Prof. Weber's disclaimer of the belief which I mistakenly attributed to him; but only that I ought to have directed it, not against his personal opinion, but against the opinion which ought to be arrived at and confidently held by everybody whom he shall succeed in persuading of the truth of his principal thesis.

Nothing which my essay contained tended, so far as I am aware, to deny that Prof. Weber held Babylon to be the ultimate place of origin of the lunar zodiac; it was only the strange and unnecessary complication of his view, as I understood it—that, while Babylon was the ultimate source, neither Arabia nor China had derived it from Babylon directly, but each had gotten it indirectly, through India—which I set myself to oppose.

As regards the immediate origin of the Arab *manāzil*, Prof. Weber still asserts with the utmost confidence, against my objections, that they must be looked upon as imported out of India into Arabia. The only new evidence bearing upon the question is that contained in a paper by Steinschneider in the Journal of the German Oriental Society for 1864 (vol. xviii., pp. 118–201), respecting which Weber claims that "it leaves hardly a doubt about the matter." I am sorry to say that I cannot in the least concur in this estimate of the results of Steinschneider's researches. In the first place, so destitute is his paper of unity and method, of such a heterogeneous and confused mass of notices, references, digressions, and by-the-way's, is it made up, that, for myself, I hardly know what it does and what it does not attempt to prove—nor was its author, at the end of his work, in a better plight: he most ingenuously confesses that he cannot quite see what he has been driving at, or to what conclusions his wanderings have led him.* But in the second

* The passage deserves to be quoted, as one of the curiosities of literature. "It would now have been my task to put together in a brief form a concluding result, at least respecting the chief points. I must, however, acknowledge to my sorrow, that the reduction of the new and in part perplexing material, in the midst of various outward interruptions, and during the printing of the essay—which for obvious considerations I might not disturb or delay—has not permitted me the repeated

place, the authorities upon whom Steinschneider and Weber rely to prove that the Arabs acknowledge themselves to have borrowed the asterismal system from India, have no right to be heard at all upon the point here in controversy. They are *savants*, great lights of the period of Arab literary and scientific culture, the oldest of them writing at a time some century or two posterior to the rise of Islam; and the *manāzil*, on the testimony of the Korān itself, are an ante-Islamic institution. No one who bears in mind the deep obscurity resting upon Arab conditions prior to the time of Mohammed, the paucity of authentic information respecting them collectable from the Arab historians, will be likely to believe that Jafar and al-Kindi are entitled to speak with authority respecting the origin of a system whose use dates back to primitive times in Arab history. The late lamented Woepeke, in whose learning and critical judgment we have reason to repose the highest confidence, is unwilling (in his last communication to the *Journal Asiatique*) to believe upon the sole testimony of Arab mathematicians that the *gobār* signs of notation, even, were brought to Arabia from India; pointing out that "unfortunately, historical criticism is wanting to such a degree in most Arab writers, that their evidence can only be accepted with the greatest reserve, when it concerns facts of which they could not have immediate and certain knowledge." (*Journ. As.*, [6] i. (1863), p. 69.) We do not need, however, to discredit entirely the statements of the Arab scientists as to their borrowings from India in connection with the asterismal system; we only need to interpret them by the aid of other known facts, and to find out what they really mean. And what are the facts? In the first place, the Arabs had a system of lunar asterisms before the rise of Islam. In the second place, a hundred years after Mohammed, in the eighth century, it is well established that the Hindu astronomical science, as represented to us by the *Siddhāntas*, and known to date from the fifth and sixth centuries, was brought to the knowledge of the Arab learned, and eagerly accepted by them; and, in the following century, we find them ascribing their doctrine of the asterisms to Hindu authorities. If, now, their later series of asterisms agreed precisely or very closely with that which the *Siddhāntas* accept and teach, we should have a right to conclude that they actually obtained them from the Hindus, abandoning or modifying (to an extent which

working-over, and the quietness of thought, requisite for the accomplishment of such a task. Let, then, the following corollaries be received with indulgence. They are meant to serve only as an invitation to the examination and comparison of materials inaccessible to me, and so to lead the way to a definitive opinion." (p. 200.) Of the corollaries thus modestly and provisionally set up, the only one bearing on the question now under discussion is to the effect that, according to the Arab authorities, the Hindus counted twenty-seven asterisms, instead of twenty-eight: and this, as we shall see farther on, makes directly against the theory that the Arab system is derived from India. If, now, Dr. Steinschneider has later gained confidence to say "I claim, as the main desert of my essay, the proof that the lunar stations belong to the grand circle of ideas which have come forth from India to Europe, and have swayed the Middle Ages" (see Weber's essay, p. 427, note 2), we can only reply, that even his former confusion of mind was greatly preferable to a conclusion so little warranted by his facts, and which exaggerates the European influence of the lunar zodiac as much as it over-estimates the value of the evidence showing India to be its original home.

it would always remain beyond our power to determine) their own ancient institution: we could say with confidence that the *mandzil*,^{as we know them}, were derived from the *nakshatras*. But, so far is this from being the case, that the Arab series corresponds with the Hindu in only two-thirds of its members, while, in a considerable part of the remaining third, it agrees closely with the series accepted in far-off China. Moreover, the Arabs never think of counting less than twenty-eight asterisms, while the Hindus, for the purposes of astronomical and astrological calculation, almost uniformly acknowledge only twenty seven. The case being thus, it is, I submit, incomparably the more plausible supposition that the later system of *mandzil* is the same with the earlier; that the Arabs did not servilely abandon their own time-honored institution and put a foreign one in its place; and that, when they confess their indebtedness to the Hindus, it is for the scientific application of the system, for its astronomical and astrological uses, which they would naturally adopt along with the rest of the scientific Hindu astronomy. They might truthfully ascribe their doctrine of the *mandzil* to India, even while they adhered strictly to every one of the familiar constellations which their fathers had been wont to observe and revere.

I can discover, therefore, no ground whatever for the assumption that the known *mandzil*, considered as a series of asterisms ("with Shara-tân at their head," as Weber repeatedly specifies—as if the choice of a starting-point, in an annular series, was a matter of other than wholly subordinate consequence, or could determine the identity of the system), have been modified by post-Islamic borrowings, or that they are anything but the ancient *mandzil* which the Korân mentions, and whose origin goes back to a period unattainable by the knowledge or the surmises of Arab *savants* of the ninth century. Of course, the possibility of their ultimate derivation, after all, from India is not excluded; but no evidence has been yet adduced which goes to prove it.* To our apprehension, the Indian, Arabian, and Chinese series of asterisms must remain, for the present, three independent forms of the same system, and their historical tie of connection is yet to be discovered.

In my former article, I have charged Prof. Weber—not, indeed, with holding that the *nakshatras* are single stars only, but—with reasoning about them, in one important respect, as if they were single stars: by regarding, namely, the spaces in the heavens which they designate, and to which they give names, as measured from one asterism to the next, thus making them virtually stars limiting the spaces, like the Chinese *sieu*, instead of groups occupying the spaces, like the Arab *mandzil*. Herein he claims that I have misrepresented and done him flagrant in-

* Prof. Weber, in his eagerness to admit the Hindu derivation of the *mandzil*, is ready to accept, as indication of a possible early astronomical influence of India on Arabia, "Levy's discovery of an inscription in ancient Hindu characters on the peninsula of Sinai;" but, aside from the infinitesimal value of such a fact, even if established, in such a connection, the alleged discovery is, as yet, only a conjecture: Levy has found among his Sinai inscriptions one of which he can make nothing; but, confident that he perceives in its characters a likeness to ancient Indian alphabets, he turns it over to the Indianists, for them to read it—if they can. (See *Zeitch. d. Deutsch. Morg. Ges.*, xiv. (1860) 483.)

justice, the plain purport of his words being otherwise.—Let us look at the facts in the case.

Biot has found, in the eighth chapter of the *Sūrya-Siddhānta*, a definition of the places of the junction-stars of the several asterismal groups which shows them to stand at greatly varying distances (from three to thirty degrees) from one another. These distances, or intervals from star to star, he regards as constituting, after the manner of the Chinese *sieu*, the lunar mansions or stations into which the moon's path is meant to be divided; and he declares them, on account of their inequality, so ill-suited to their purpose that the incongruity constitutes a powerful evidence of the non-originality of the Hindu system. I have repeatedly pointed out—what, indeed, must be evident to any one who has examined the *Sūrya-Siddhānta* with any care—that this is a palpable misapprehension on the part of Biot; that the treatise referred to does not, any more than any other Hindu authority, measure the *nakshatra*-spaces by the mutual distances of the *nakshatra*-groups, but divides the ecliptic into twenty-seven equal parts; the definition of position of the junction-stars being made for a wholly different purpose. Prof. Weber, on his part, fully accepts and endorses Biot's error, and the mode of division implied in it;* this inequality of distances among the *nakshatras* is to him (*Nakshatras*, i. 285) one of the characteristics of that late phase of development of the Hindu system to which the Chinese corresponds; and he promises to prove that in the *Brāhmanas* is to be found "no trace of an inequality of distances; but, on the other hand, traces and direct notices which point to their equality." Who, now, would fail to draw from such a concession and reply the conclusion that Weber, like Biot, measured the *nakshatra*-spaces from star to star, and to the objection raised by the latter could only oppose the plea that a different series of asterisms was recognized in the olden time—proceeding afterward to fortify his plea by elaborate arguments, founded on the names, numbers, and divinities of the asterisms, to the effect that the series had been a variable and shifting one? Again, later (*Nakshatras*, i. 314), he points out the discordances between *Brahmagupta* and *Varāha-mihira*, touching the dimensions allotted by them to some of the asterismal spaces, as a very strange circumstance, and one which "seems not to furnish the most favorable testimony to the accuracy of identification of the *nakshatras* in the sky at the period." Here, again, one cannot but ask, how should such discordance imply inaccuracy of iden-

* That he should have done so in his *Essays on the Nakshatras* is not much to be wondered at; but I totally fail to comprehend how he could have repeated the blunder in his later article (p. 440), after I had so fully exposed its character (above, pp. 18, 21)—at least, without attempting to controvert my position, and to show that Biot had understood, and that I had misunderstood, the *Sūrya-Siddhānta*. The matter is, indeed, too clear for controversy: the *Sūrya-Siddhānta* does not teach an unequal division of the zodiac; its positions of the junction-stars, laid down in the eighth chapter, are in no wise inconsistent with the system of equal divisions inculcated in the second; nor do they constitute a special coincidence between a later Hindu form of the institution and the Chinese *sieu*; and for a charge of incongruity they furnish no manner of foundation. As well infer from an astronomical definition of the places of α Arietis, α Tauri, α Geminorum, and so on, that the signs of the zodiac are of unequal extent.

tification of the star-groups, unless the spaces be measured from star to star? If each asterism has a space set apart to it simply from the neighboring portion of the ecliptic, authorities may well enough differ as to whether equal division shall be made of the interval between two asterisms, or whether a larger part of it shall be attached to the one or to the other of them. And then Weber goes directly on to remark the inconsistency between the spaces assigned by the two authorities referred to and those derivable from the *Sûrya-Siddhânta*, the latter being measured, according to Biot's erroneous method, by the intervals of longitude between junction-star and junction-star: and he does not give us the slightest reason to suspect that he contemplates any difference in the mode of measurement in the three several cases.

I do not need to take up in detail other like instances; so far as I have been able to discover, the Essays contain nothing from which a conclusion could legitimately be drawn militating against that derivable from the passages already discussed: everything, rather, tends to support the latter. Indeed, I conceive my understanding of Weber's meaning to be amply justified by the very quotations of his former words which he makes in his reply, for the purpose of convicting me of misrepresentation. In every instance, he speaks of the equal or unequal "distances," or "mutual distances," of the *nakshatras*, or the lunar stations. Now, as everybody acknowledges that the word *nakshatra* has two meanings, namely 'asterism,' and 'space in the sky, or division of the ecliptic, marked by an asterism,' it seems to me not only a natural, but an unavoidable inference, that when any one talks about the "mutual distances of the *nakshatras*," he means the intervals between the asterisms themselves, the stars or star-groups—just as, when one speaks of the mutual distance of Rome and Naples, he is necessarily understood to refer to the interval between the two cities, and not to the respective extent of the Roman and Neapolitan territories. Who, of his own head, could possibly have imagined that Prof. Weber would habitually write of the "mutual distances" of the successive divisions of a circle, between which there are no distances—which are contemporaneous? If he had usually talked about "equal spaces," or "equal extent of the *nakshatras*," he would at least have given us a clew, by which we might have arrived at a recognition of what he at present claims to have been the true intent of his language everywhere. But, in the solitary passage which he is able to cite where he uses the expression "the spaces of the twenty-seven *nakshatras*," he immediately adds "their mutual distances from one another," as if expressly to guard against our understanding the "spaces" to be measured otherwise than by the "distances" between the stars!

If Prof. Weber, accordingly, now maintains that, whenever he said "equal or unequal distances of the *nakshatras*," he all the time meant "equal or unequal extent of the *nakshatra*-spaces," measured not by interval but by vicinity, it is reasonable that we should believe him upon his word: but it is equally reasonable that he should allow the misunderstanding to have been his own fault, and not imputable to us, who were obliged to infer his meaning from his language alone.

I am, I must confess, not a little puzzled to understand upon what

ground it is that Prof. Weber (p. 437) pronounces my habitual representation of the word *nakshatra* by 'asterism' to be, "etymologically, thoroughly unjustifiable." The absolute derivation of *nakshatra*, indeed, still remains a mooted question, as at the time when our notes to the *Sūrya-Siddhānta* were prepared; neither Aufrecht's explanation of it (*nakshatra* = *nakta-tra*, 'night-keeper'), nor Haug's (*nakshatra* = *nak-sattra*, 'night-station') being wholly satisfactory and convincing—especially the latter, which is directly opposed to the demonstrably earliest meaning of the word. This, as Prof. Weber himself has been at much pains to show (*Nakshatras*, ii. 268 sq.), is 'star' or 'constellation.' Nor has the term ever lost its primary signification, exchanging it for that of 'space in the sky;' the latter has only been added as a recognizably secondary or derived meaning, arrived at through means of the specialization of *nakshatra* as the distinctive name of the lunar asterisms, and then the use of these as marking and denominating the spaces in the sky which they occupied. The scholiast to the *Sūrya-Siddhānta* calls by the name *nakshatra* not the twenty-eight lunar asterisms alone, but also Sirius, Capella, and the other fixed stars whose positions are defined in connection with theirs (*Sūrya-Siddh.*, viii. 10–12, 20–21); and the astronomical treatises themselves, when they wish to speak exactly, avoiding the ambiguity arising from the double use of the term, do so by setting up a new special name for the spaces, namely *nakshatra-bhoga*, *bhābhoga*, 'the portion of [the heavens, or of the planetary path,* belonging to] an asterism.' I submit, therefore, that when we would avoid the same ambiguity, we are fully justified—etymologically, scientifically, and by every other consideration—in talking of "asterisms" and "asterismal portions or spaces." I made choice of the word *asterism* because, while more usually employed to designate a group of stars, it does not etymologically or invariably do so, and is therefore conveniently applicable to the *nakshatras*, which, though prevaillingly groups, count among their number a few single stars.

Prof. Weber's opinion and my own are still at variance—perhaps, after all, less in reality than in appearance—as to what constitutes the central and fundamental feature of the asterismal system, and what was its history of growth. He holds (p. 436) that "the division of the heaven into twenty-seven portions, corresponding with the daily motion of the moon," was the earlier step, and that "the selection of the stars which should mark those portions" was the later step. This is, if I am not mistaken, partly right, but also partly wrong and wanting in coherence. The division of the heavens may well enough be claimed to have been the first thing accomplished; but how, I would ask, could it be accomplished save through the means of the selection of stars? Prof. Weber will hardly be disposed to maintain that the Hindus can have first staked out or chalked off the sky into twenty-seven sections of 13° 20' each, and then proceeded to examine each section

* I ought, perhaps, to shun the use of this phrase, as Prof. Weber (p. 436) suffers himself to be misled by my innocently introducing it here and there as synonym for 'ecliptic,' to avoid the burdensome repetition of the latter and its other equivalents, into suspecting me of heresy and inconsistency touching the Hindu knowledge of the planets.

and see which among the stars it contained could be most conveniently employed to mark it? Any assumption of an independent division, made by the aid of a clock and meridian circle, or of any other astronomical instruments, is excluded by the nature of the case.* Weber's earlier step, then, would be no step at all, unless combined with his later one. It would issue merely in the formation of an idea of a division, in a preliminary apprehension that the heavens might, could, would, and should be parted off into twenty-seven or twenty-eight portions, each of which was traversed by the moon in a day's motion. Such an apprehension is, indeed, an essential prerequisite to the establishment of a system, but it is nothing more than that; it might come to be realized in the sky, and it might not; it is a mere idea, and not an institution. The institution is founded when the division is actually made; that is to say, when the determining stars and groups of stars are selected, assigned to their purpose, and combined into a series. In performing this work, we cannot well conceive that anything but the moon's motion itself served as guide; observation of her position from night to night, and through a number of successive revolutions—with some aid, possibly enough, from the determination of opposite groups, as shown by their position upon opposite horizons, or from other such simple methods—would lead gradually to the choice of the asterisms, and the formation of a satisfactory series, answering thenceforth (to adopt Müller's very apt comparison) the purpose of the figures on the dial-plate, to mark the point in her revolution at which the moon had at any given time arrived. What a dial-plate is without figures and without fixed position, that would be a lunar zodiac without designated asterisms. In the series of asterisms, and the system of divisions as bound to it and dependent on it, we have a real institution, capable of being described, handed down by tradition, communicated to other peoples. And the asterisms are the visible and concrete portion of the institution, that which determines its identity, that to which the tradition would cling most closely; that they should be loosely held, or lightly abandoned, and the original work of selection done over again in any wholesale way, is not a thing to be thought of. Some degree of modification it would, of course, like every other human institution, be liable to undergo; there is not one of the groups composing it which might not be changed for another if continued use should show

* Unless, indeed, we are to adopt Müller's acute suggestion (Preface to the fourth volume of the *Rig-Veda*, p. lii.), that "any twenty-seven poles planted in a circle at equal distances round a house would answer the purpose of a primitive observatory" for the *nakshatras* as portions of the sky, and for the positions of the sun and moon among them. The apparatus would, no doubt, answer such a purpose famously, with two slight modifications: in the first place, instead of a house among the poles, we should need a twenty-eighth pole at their centre, to the apex of which the observer might apply his eye, while he revolved about it; and, in the second place, we should have to reduce the ecliptic to a coincidence with the horizon—and this would be harder to manage: for it would imply the transfer of our observatory to a place about 67° north or south of the equator; and, even there, the coincidence could happen but once a day, when the opposite solstice was under our meridian. After all, it is hardly true that "our notions of astronomy cannot be too crude and imperfect if we wish to understand the first beginnings in the reckonings of days, and seasons, and years" (*ibid.*).

that the substitution would be an improvement, or if other considerations should prompt it; which of the series should be accounted as the first would be (in the absence of any determining motive directly connected with the moon and her motions) a matter of comparative indifference, to be settled by changing usage. In short, every variation which we actually note in the three systems, upon comparing them with one another, is such as we might look for, being consistent with all that strictness of tradition which we have reason to expect in an institution of this character. Even the complete change of application to which the Chinese have submitted it is but the natural accompaniment of a change in their general methods of astronomical study and observation, the complete carrying out, as I have already indicated (above, p. 44), of a process which the Hindus also initiated, but pursued no farther.

Somewhat farther on (p. 438 sq.), Prof. Weber seems desirous to fasten upon me the reproach of disingenuousness (not to call it by a worse name), in that I have, under the influence of his Essays, changed my views in one important point respecting the *nakshatras*, without acknowledging it, and even with an attempt to hide the fact from sight. In the notes to the *Sûrya-Siddhânta*, namely (pp. 207-8; Journ. Am. Or. Soc'y, vi. 351-2), I had at some length argued that the Hindu *nakshatras* were not properly to be regarded as a lunar series; that they were, rather, a simple system of ecliptic division, made for general uses: while, in my article on the asterismal system, that opinion was tacitly abandoned, passed without a mention. Owing to the peculiar circumstances under which our *Sûrya-Siddhânta* was prepared and published—I having to do the bulk of my investigation of each separate subject as it came up in order, and being unable to detain the printer until I should arrive everywhere at a fully matured conclusion—the notes contain more than one opinion which I have since seen reason to relinquish as untenable. Some of my errors I discovered in time to rectify them, partially or completely, in the “additional notes;” others (of which by far the most important is my provisional adhesion to M. Biot’s views respecting the derivation of the *nakshatras* from the *sieu*) I have corrected elsewhere, or should do so in a second edition of the work, or at any other suitable opportunity. Of the former class is the view now under consideration; I had arrived at it under the joint influence of Biot’s teachings and of the *Sûrya-Siddhânta*, in which treatise the *nakshatras* exhibit no trace of a special connection with the moon; but though I held it at the moment with considerable confidence, I soon saw reason seriously to question its correctness; and I withdrew it, virtually, if not categorically, in the twenty-eighth additional note (p. 325; Journ. Am. Or. Soc’y, vi. 469), where I come to the contrary conclusion—namely that “it may fairly be claimed that the asterisms, as a Hindu institution, are an originally lunar division of the zodiac.” My change of opinion was due to a renewed and fuller consideration of the same evidence which I had had before me in already discussing the question, and also to my growing emancipation from subservience to Biot’s dogmas. That Prof. Weber’s writings and private communications had an important share in enlightening me I have no disposition to question, although I can no longer recall all the steps of my conversion: but he is altogether mis-

taken in supposing that his Essays on the Nakshatras were instrumental in effecting it; when they appeared, the question was already a thing of the past to me; so little was it present to my mind, and so far was I from thinking that, after what I had said in the additional note, he would still regard me as maintaining the opinion put forth and defended in the notes on the text,* that (as he truly points out on p. 438) I totally misapprehended the meaning of the remark made by him in his first Essay (p. 316), that he should prove erroneous my assumption that the *nakshatras* were zodiacal constellations, rudely marking out divisions of the ecliptic. I think, therefore, that Weber judges me with unnecessary harshness, or even with evident injustice, when he holds up to reprehension the claim made in my article, that my view of the asterisms still remained, "in nearly all essential respects" (namely, in those which I go on to detail—among them, that the series was looked upon as having been selected to mark the moon's progress through the zodiac) "the same with that expressed in the notes on the *Sūrya-Siddhānta*," and when he would fain show that, in examining and criticizing his Essays, I have intentionally ignored one point of prime consequence respecting which I had been convinced by their arguments. I may be unreasonably difficult to convince of the erroneousness of an opinion which I entertain: of that others must be the judges: but I believe that I know myself well enough to be justified in claiming that I am ever ready, when convinced, to confess it with frankness.

To my former discussion (above, p. 56 sq.) of the question whether the Hindu asterisms are originally twenty-seven or twenty-eight I have nothing of consequence now to add, by way either of extension or of amendment: my argument was drawn out with the most scrupulous care to allow no fact or consideration more weight than fairly belonged to it, and I am unable at present to see that it requires modification. Prof. Weber's criticisms do not touch it: he has failed to apprehend my position, as a purely negative one; to see that I am not trying to prove the number twenty-eight original by Indian evidence—which, indeed, I should be presumptuous to attempt—but only to show that that evidence does not unequivocally prove the number twenty-seven original; that, if the primitiveness of the series of twenty-eight is strongly supported by evidence obtainable outside of India, it cannot be confuted from the Hindu literature. Weber, in his partizanship for the contrary opinion, would fain compel me to infer that the seventh hymn in the nineteenth book of the *Atharva-Veda*, in which *Abhijit* is mentioned along with the other twenty-seven asterisms, must necessarily be a very modern one, because the book which contains it is a late addition to the *Atharvan*. But the demand is obviously unreasonable and groundless. The same nineteenth book includes passages, from single verses to whole hymns, which are also found scattered through five of the ten books of the *Rig-Veda*: and Weber would hardly require us to admit that half the *Rig-Veda* is more recent than the main body of the *Atharvan* collection;

* It was doubtless the case that he simply overlooked the additional note, as was so easy to happen, although it is fully referred to in the index, under its proper subjects.

yet, if we must allow that the seventh hymn, because of the place where it occurs, cannot be otherwise than modern, then our conclusion must be the same as regards the tenth and eleventh (which are Rig-Veda vii. 35), or the sixth and thirteenth (which are Rig-Veda x. 90 and 103), and so on. As for the palpably recent words, to which Prof. Weber a second time refers us as indicating the late date of the hymn in question, they do not happen to be contained in the hymn itself, but in another one, an appendage to it, of very different style and content.

In weighing and combining such doubtful and (apparently) partially conflicting evidences as we have to rely upon in making up our view of this general subject, one person will naturally attribute more force to considerations of one kind, another of another. To myself, I will own, almost anything seems easier to assume than the repeated borrowings, the successive alterations under foreign influence, to which Prof. Weber is so ready to resort as a solution of the difficulties in which his reasonings involve him. He thinks that the Hindus may have first got a series of twenty-seven asterisms from Babylon, and then, afterward, another of twenty-eight, extending the system because they understood that the Babylonians had done the same; that the Arabs may have accepted from the Babylonians, or perhaps from the Hindus, in ante-Islamic times, an asterismal system, which they certainly cast away, putting in its place a modern Hindu one, at some later period; that the Chinese *sieu*, too, are of Babylonian origin, but that their partial agreement with the *nakshatras* of the *Sûrya-Siddhânta* is a mysterious circumstance, to be conjecturally explained by communication, in the one direction or the other. In my view, on the other hand, an institution of this character, when once introduced and naturalized, fairly adopted by the people to whom it comes and made familiar to their use, is thenceforth virtually a native institution, having its history of development determined by internal circumstances, not readily changed from a proneness to imitate what is foreign. The grand reason for believing that the Hindu system is originally composed of twenty-eight members is that both the others are so; and, to my apprehension, it outweighs all the apparently opposing circumstances, and forces us to endeavor to explain these in such a manner as to accord with it. In fact, the more clearly Prof. Weber is able to show that in the early times, no less than in the later, the Hindus prevailingly reckoned twenty-seven *nakshatras*, the more does he increase the probability that they began with reckoning twenty-eight; inasmuch as he thereby decreases the probability that the *sieu* and *manâzil*, which are systems of twenty-eight members, were derived from the *nakshatras*, and forces us toward the conclusion that they all originate together from a fourth source, or else that the *nakshatras* are derived from the *sieu* or the *manâzil*. In the *Siddhântas*, the *Jyotisha*, and the *Brâhmanas*, the division of the ecliptic is twenty-seven-fold, and the twenty-eighth asterism is a *hors d'œuvre*. The most conspicuous result of Steinschneider's recent inquiries among the Arab authors, according to his own (provisional) summary (see above, p. 363, note), is to the effect that they report the Hindu astronomers to reckon twenty-seven *nakshatras*. The consideration, then, that, if the Hindus had propagated a lunar zodiac through Asia, they would

have been likely to propagate one of twenty-seven divisions, and not of twenty-eight, is perhaps entitled to even more weight in the general argument than I formerly (above, p. 57) claimed in its behalf.

Prof. Weber simply scouts as impossible my opinion that the words *upariśtāt* and *avastāt*, literally 'above' and 'below,' used by the Tāitirīya-Brāhmaṇa in describing the position of Abhijit relatively to the Aśādhās and Cṛonā, may be rendered 'beyond' and 'this side,' and understood to designate the rank of Abhijit in the series rather than its position among the stars: he insists that they can only signify 'farther up in the sky' and 'farther down in the sky.' This seems not altogether consistent with the position which he formerly maintained, in his controversy with Goldstücker respecting the antiquity of the art of writing in India. Whereas the latter asserted that the words "above" and "below," as employed by the Hindu writers (in a manner precisely the opposite of that usual among us) to signify respectively a succeeding and a preceding passage, were to be taken in a perfectly literal sense, as indicating physical position in the pile of written leaves constituting a manuscript, Weber (Ind. Stud., v. 33) claimed for them a figurative application merely, and pointed out that various Sanskrit words meaning 'above' were frequently used in the sense of 'farther on, subsequent,' in connections where no conception of physical position was assumable. If, then, expressions for 'above' are familiarly employed by the Hindus to mean 'beyond,' without reference to physical position, I see no absurdity, nor even any special difficulty, in so understanding *upariśtāt* in the passage under discussion, even though I am unable to put my finger upon another passage where it has this signification: the two ideas of 'above in place' and 'beyond in order' are so convertible in ordinary Sanskrit usage, that any word which literally means the one may be employed to mean the other. The correlation of *upariśtāt* to *avastāt*, which confessedly admits the contrary sense, of 'hither, this side,' would of itself be enough to create the possibility. And a possibility is all that I require or claim; my persuasion that Abhijit has not changed its stellar place during the period of our knowledge of the Hindu system is founded on other considerations, and is strong enough to overbear the presumption which this passage would otherwise, no doubt, more naturally raise.

In the same passage I can see no necessary implication, such as is claimed over and over again by Prof. Weber, of the *newness* of Abhijit as a member of the asterismal system. It is, indeed, spoken of as if it required something more than a simple mention, like the rest; but that might be not only because it was of recent introduction, but because it was not generally accepted as included in the series of *nakṣatras* along with the other twenty-seven, and was therefore less familiarly known. And if it had been fairly brought in, since the time of the Tāitirīya-Saṁhitā, into the system, and now formed an integral part of it, as recognized by the Brāhmaṇa, we should hardly find that this work, in two out of the five passages where the *nakṣatras* are mentioned, rehearses only twenty-seven of them. Precisely this equivocal position of Abhijit, now acknowledged and now rejected by the same authorities, throughout nearly the whole period of subsistence of the institution in India, is what gives

support to my conjecture concerning it, that it is and was always a sort of outside member, with only a half-right to association with the rest.

That Abhijit has changed its place in the sky without changing its name is not a fact which Prof. Weber ought on all accounts to desire to insist upon, since its establishment tends to invalidate the claim that change of place and change of name go hand in hand with one another—a claim which he advances and urges, in order to prove the shifting and variable character of the *nakshatra*-series. Nor is the claim better supported upon the other side. Among all the variations of name presented by the authorities of various periods, we have none more striking than *mṛgaśiras* and *invokās*, *ārdṛā* and *bāhu*, *mūla* and *vicṛtāu*: but, as regards the first of these, while we have stronger and more unequivocal reasons to believe in the ever unchanged identity of the asterism than is the case, perhaps, anywhere else in the series, we have also the assurance of the highest Hindu lexicographic authority that the two names are of identical meaning;* in the second case, the star called usually *ārdṛā* marks the *bāhu*, or 'fore-leg,' of the "Stag;" in the third case, al-Bīrūnī reports the asterism to have two stars, as indicated by the dual *vicṛtāu*, and identifies it with that pair which forms the most brilliant and conspicuous feature of the larger group styled by the Siddhāntas *mūla*. In view of these and other like facts, I may safely appeal to any unprejudiced person whether variation of name is to be taken as *primā facie* evidence of change of place of an asterism.

If the Kāthaka, by reason of the circumstance that men in general are not versed in the intricacies of the astronomical and astrological doctrine of the *nakshatras*, is willing to leave it sometimes to the option of the individual sacrificer whether he will take any account of them or no, such conduct is very liberal on its part, and much to its credit as a spiritual guide; but will hardly conduct us, as Weber (p. 454) would have it do, to the conclusion that the whole subject was of such obscurity that even the astrologers could not feel certain which groups of

* It is not a little strange that even here, where the traditions of the Brāhmaṇas and the astronomical data of the Siddhāntas agree in fixing the place of the asterism beyond dispute, and where there is no shadow of a reason discoverable for our believing it to have changed its identity in the interval, Weber is still ready (p. 452) to assume that the Amarakośha's identification of *mṛgaśiras* and *invokās* is only an inferential blunder. This is quite of a piece with his former suggestion of a merely etymological reason for the definition of *mṛgaśiras* as a group of three stars—a suggestion upon which I especially animadverted in my previous paper (above, pp. 52-3). Prof. Weber appears to think at present (p. 452) that he should have been shielded from any reproach on this account by the fact that he had himself extracted and brought together the legends and other evidences which fix so distinctly the identity of the group. But, in my view, the case is just the other way. If he had not known the evidences, his suggestion would have been a less unnatural one, and simply refutable by their adduction; the very circumstance that, while having them all in view, he could yet hazard a conjecture which wholly ignored them, was what appeared to me so unaccountable that I could only compare it with the effects of a wilful blindness. I sincerely regret to see that the strength of my expressions in connection with this subject has wounded Weber, making him regard himself as accused of deliberately shutting his eyes to the truth: nothing was farther from my thoughts; I supposed that I had sufficiently guarded against such a misconception by what I had said on the preceding page (p. 51), as well as earlier (p. 10).

Reply to Weber on the Asterisms.

stars constituted the series, or hand down the knowledge of them, impaired from generation to generation. On the contrary, the first great blow to the exact tradition of the system considered as a stellar one was given, in my opinion, when the Hindus were turned from rude observers into exact calculators; when the precise data and methods of their borrowed astronomical science sent the *savants* of India to their closets, instead of to the open fields, as the scene of their learned labors; when the *nakshatra* with which the moon should be found at any particular time could be correctly determined by one who never looked at the sky, and was unable to tell one star from another. Then began the period when even he who was most versed in the *nakshatra* doctrine might at the same time be utterly indifferent as to which were the stars and the groups whose names he used so glibly. Hence the difficulty experienced by al-Biruni (at the time of whose visit to India this had already been the condition of things for centuries), and by all who have followed him, in making the Hindu astronomers point out their asterisms in the sky. Hence also, as a last example, Bâpû-Deva Çâstrin, one of the most learned and able of the living Hindu votaries of the science, in his translation of the *Sûrya-Siddhânta* (Calcutta, 1862; p. 62), makes no pretense to an independent opinion as to the identity of the asterismal groups, but adopts implicitly Colebrooke's determination of them, not venturing to vary in the slightest particular from his authority, even where it is most obviously mistaken.*

Nearly at the close of his essay, Prof. Weber, if I rightly apprehend his meaning, plants himself on ground where I can heartily join him, and where, as I think, most of our conflicting views may be harmonized. He points out, namely (p. 454), that, considering the lateness of the *Siddhântas* as sources of our knowledge respecting the *nakshatras*, we have reason even to be astonished† that the positions of the latter, as determined by them, agree so well as they do with those derived from the Arab and Chinese authorities; and he adds: "But this agreement is naturally the best guarantee of their correctness, and, where it is found to exist, the identity of the stars concerned is, naturally, assured. Where, however, there is no such agreement—where, that is to say, the *manzil* and *sien* ^{do not} correspond, but the *nakshatras* differ from them—there the fault will doubtless lie with the latter, being attributable to their defective tradition."

This is precisely the position which I would desire to maintain. If

* It is important that the utter subserviency of Bâpû-Deva in this matter should be remarked (the more especially, since it is unacknowledged, no reference whatever being made to any authority), lest it be supposed that he intelligently accepts and ratifies Colebrooke's conclusions, as agreeing with the results of his own examination of the matters concerned. For example, even Colebrooke's identification of *Apâmvasa* with "b 1, 2, 3" in Virgo is copied, although, as I have already once pointed out (*Sûrya-Siddh.*, p. 219; *Journ. Am. Or. Soc'y*, vi. 368), and have since verified by reference to eminent astronomical authority, there are no stars known to science by those names.

† That is to say, of course, if we have suffered ourselves to be persuaded by Prof. Weber's arguments that the asterismal groups were liable to and actually did suffer indefinite change, and that the Hindu astronomers were never quite assured of their identity: I know of no other ground for astonishment.

Miscellaneous:

we are to investigate the history and relations of the three systems, or of any one of them, our first step, the foundation of all our after conclusions, must be their mutual comparison: the results to be derived therefrom are surer and more reliable than any which we can obtain by other merely inferential means. Where the three are found to agree, there no theoretic considerations of general variability, of changing names, divinities, or numbers, or the like, will justify us in assuming that any one of them has deviated from the original; nothing but positive and unequivocal testimony can show such deviation. Where any two of the three agree, and the third differs from them, we have at least *prima facie* reason to believe that the former truly present the primitive institution, which the other has at this point abandoned—for what reasons, and at what period, must be judged in each case separately, upon testimony or from conjecture. In the very few cases (not more than two or three) where all disagree, only conjecture, guided by considerations of general fitness, can presume to point out the original. Such a comparison as this I have attempted to make, in my former article (at page 45), and I claim with confidence, now as then, that it should constitute the basis of every general inquiry into the origin and transmission of this interesting and problematical institution. Those who thus begin alike will be likely to agree in their main results, however they may differ in regard to details. Different minds are differently impressed by the same evidence, and what is satisfactory ground for a decided opinion to one person only suggests a presumption, if even that, to another. For my own part, the sole opinion which I can hold with confidence is that every attempt hitherto made to prove any one of the three systems derived from either of the others is demonstrably a failure; but, partly for that reason, partly for others already set forth, I incline to think, with Prof. Weber, that some fourth people is most likely to have been the originator of the primitive lunar zodiac.

It remains to say a few words upon the same two points of which I spoke by way of appendix to my first article; since, though they are not immediately connected with the question of derivation of the *nakshatras*, their treatment by Prof. Weber is not without an important bearing upon the controversy between us.

To one accustomed to deal with mathematical questions, the simple statement that the moon's synodical revolution and the yearly revolution of the sun are entirely incommensurable—that the year is composed, not of twelve lunar months, nor of twelve *plus* or *minus* a minute fraction, but of about twelve and a third—is sufficient foundation for the inference that full moon must occur in all parts and at all points of the ecliptic, and could not be bound for any continuous period to any particular series of parts or points. For the benefit, however, of those to whom the bearings of such a statement would be less clear, and quite especially for the benefit of Prof. Weber, who had already shown that he did not appreciate them, I spent a good many hours, while preparing my previous essay, in calculating the sidereal place of the moon's opposition through a series of years, in order to show by a sufficient illustrative example precisely what would be the effect of the incommensurability referred to in shifting the places of the moon's full from

asterism to asterism. And I submit at present that the illustration was both clear and sufficient, and ought to convince any well-informed and unprejudiced person. So far, however, as Prof. Weber is concerned, my labor was thrown away: he is still quite incredulous, and anxious to have the matter tested anew, "by competent astronomical authority." What authority he may be willing to accept as competent, it is impossible for me to say; but I cannot see that any profound astronomical science, that much more than a little arithmetic, is called for in order to deal with a question so simple. He would surely have done both himself and me better justice, if, instead of publishing to the world his own inability to judge the case and his lack of confidence in me, he had referred my assertions to some mathematical friend to be tested. The difficulty is that, having formed a very plausible theory in explanation of a historical fact, he is unwilling to see that it involves an impossibility, and must therefore be abandoned. It appears to him so "decidedly" and "in the nature of things" to be taken for granted that, if the Hindus have a set of permanent names for the months derived from certain *nakshatras*, they must have selected them because, at the time, the moon was continuously or customarily full in those *nakshatras* rather than in any others of the series, that he is unreasonably impenetrable to the proof that this never was or could have been the case. To me, on the other hand, it seems not hard to find an explanation which shall include and reconcile both the historical fact and the astronomical. It was practically more convenient for the Hindus to have fixed names for their months, rather than such as varied from year to year, according to the asterisms in which the moon was actually full; and the present series was pitched upon simply because it was as good as any other. The work may even have been done in the closet, without reference to its real truth in any one year. It was necessary to make a somewhat arbitrary choice, and the Hindus had sufficient good sense to make it, and to establish a fixed nomenclature for their months, without being disturbed by the fact that it could never be strictly correct for two years in succession.

The other case is of a very similar character. In his *Essays on the Nakshatras*, Prof. Weber points out that certain older Hindu authorities treat *Thālguna* as first of the spring months, while certain later ones put *Caitra* in its place; and yet others, whom he regards as the latest of all, allow the same rank to *Vāicākha*; and he suggests that the precession of the equinoxes furnishes a sufficient explanation of the substitution. I, in my criticism, reply that in this last point he is mistaken; that he must seek some other mode of accounting for the discordance of his authorities, since, so far as the precession is concerned, we should expect just the contrary to be the case. Now, however, he insists, on philological grounds, upon his former explanation, thus converting what was at first a venial oversight into a discreditable blunder. He combats my objections as if I were trying to force him to admit that *sūtras* are two thousand years older than *brāhmaṇas*, and comments than *sūtras*. I answer, as in the preceding instance, that this is not a matter with which I have undertaken to meddle; that I am not opposing his philological facts, but only putting alongside them another, of a

scientific character, which overthrows, not those facts themselves, but his explanation of them, compelling him to seek another—which need not be difficult to find. A very slight consideration of the point, with the aid of a globe or chart, or of consultation with some friend better versed in such subjects, might have shown him his error, and saved him from putting himself into the somewhat equivocal position of one who attempts to prove, “as philologue,” that the precessional movement of the equinoxes is from west to east, and not from east to west.

These two instances, in which Prof. Weber discredits and rejects, without any due examination, my well-meant rectifications of his conclusions, in matters respecting which he has not generally been unwilling to allow that I am better qualified to judge than he, seem to me to indicate that he has put himself into a more than reasonably antagonistic and repellent attitude toward my article, and all its reasonings and conclusions. That it was so may doubtless be ascribed in great part to the effect of those misapprehensions of his position on one or two important points which I have above had to excuse or explain. I am not without hope that at present, in view of my explanations, he will be led to reopen the discussion in his own mind, and to attribute more weight than he has hitherto been able to do to my views upon the points as to which we differ.

Proceedings at Boston and Cambridge, May 16th and 19th, 1864.

THE Annual Meeting of the American Oriental Society was opened soon after 10 o'clock A. M. on Wednesday the 18th of May, at the room of the American Academy of Arts and Sciences in Boston: the President in the chair.

The minutes of the previous meeting having been read by the Recording Secretary, and approved, Prof. Beck of Cambridge, as chairman of the Committee of Arrangements, reported the titles of the papers already offered, which would be presented to the Society at this meeting, and invited other communications; and also gave an invitation to the Society to re-assemble at his house at 4 o'clock P. M., as well as another, on the part of Mr. Epes S. Dixwell of Cambridge, to a social gathering at his residence after the adjournment for the day. All these arrangements were accepted, with thanks.

The President then called the attention of the Society to its losses of members by death during the year, and, requesting the Corresponding Secretary to read the list of names of the departed, not previously reported, invited remarks from any one by way of respect to their memory. The list of names was read as follows, with appropriate notices, by the Secretary, of the claims of each to the Society's respectful remembrance:

CORPORATE MEMBERS.

Rev. David O. Allen, late Missionary in India.
Admiral Andrew H. Foote, U.S.N.
Rev. T. Starr King, of San Francisco.
Mr. Pelatiah Perit, of New Haven.
Prof. John N. Putnam, of Dartmouth College.

CORRESPONDING MEMBERS.

Dr. J. R. Ballantyne, of London.
Mr. J. Cor, late Dragoman of the French Embassy at Constantinople.

HONORARY MEMBER.

Prof. Jacob Grimm, of Berlin.

Prof. James Hadley of New Haven then gave a somewhat detailed sketch of the life and literary labors of the distinguished Jacob Grimm.

The report of a Committee appointed at the previous meeting to consider the plan of Dr. Macgowan for explorations in Southeastern Asia was now called for; whereupon the chairman of the committee reported that it had communicated with Dr. Macgowan respecting his proposed explorations, and, although without any such specific information as would authorize its pronouncing upon the merits of his plan in detail, had expressed to Dr. Macgowan, in writing, the cordial interest with which the Society regards all attempts to add to our knowledge of eastern countries, and the hope that the United States Government would facilitate the successful execution of his plan by every means in its power. This report was accepted, and the committee was discharged.

The reports of retiring officers, being next in order, were then presented.

1. *Treasurer's Report.*

The Treasurer's receipts and expenditures for the year 1863-4 had been as follows:

RECEIPTS.					
Balance on hand, May 17th, 1863,	-	-	-	-	\$458.93
Members' fees: 2 life-memberships,	-	-	-	150.00	
ann. assessments for the current year,				370.00	
do. do. for previous years,			55.00	575.00	
Sale of the Journal: abroad,	-	-	-	100.16	
at home,	-	-	-	21.00	121.16
Donation,	-	-	-	-	40.00
Total receipts of the year,	-	-	-	-	1195.09
EXPENDITURES.					
Paper and printing of Journal (vol. viii, Part 1), Proceedings, etc.,	-	-	-	-	\$698.23
Expenses of Library and Correspondence,	-	-	-	-	46.51
					744.74
Balance on hand, May 18th, 1864,	-	-	-	-	260.85
					1195.09

Exclusive of the balance on hand, a draft for £158,14,8, received from Hon. C. W. Bradley, as a donation to the Society from eight American merchants in Shanghai, for the purchase of a fount of Chinese type, had been deposited with Messrs. Baring, Brothers & Co. for collection.

This report, having been duly audited by Rev. C. R. Hale of Newport and Rev. F. W. Holland of Cambridge, was subsequently accepted.

2. *Librarian's Report.*

The Librarian laid before the Society the names of donors to the Library for the year, which, together with the titles of the books presented by each, will be found appended to this report of proceedings. The present total number of printed titles in the Library is 2490; the increase for the year, 84; the present total of manuscript titles, 119; the increase for the year, 1.

3. *Report of Committee of Publication.*

This Committee had only to report that it had finished the printing of Vol. viii, Part 1, of the Society's Journal, and had laid copies on the table, for distribution to the members.

4. *Corresponding Secretary's Report.*

The Corresponding Secretary communicated the names of the following gentlemen, who, by acceptance of their election, made at the last meeting, had become Corporate Members:

Mr. John Carter Brown, of Providence, R. I.
 Mr. Joshua Coit, of New York.
 Rev. George R. Entler, of Meredith, N. Y.
 Mr. J. Willard Gibbs, of New Haven.
 Mr. William H. Hale, of Albany, N. Y.
 Mr. James Lenox, of New York.
 Rev. John Lillie, D.D., of Kingston, N. Y.

Prof. Lewis R. Packard, of New Haven.
Mr. Augustus R. Street, of New Haven.
Rev. Thatcher Thayer, of Newport, R. I.
Mr. Addison Van Name, of New Haven.
Mr. Francis Wayland, Jr., of New Haven.

He also read a letter of acceptance of Corresponding Membership from

Prof. Friedrich Spiegel, of Erlangen, Bavaria.

In the general budget of correspondence during the past half-year, which was presented, and read so far as was deemed worth while, the most interesting item was the announcement from Hon. C. W. Bradley, the Society's indefatigable friend and benefactor, that, at his solicitation, eight American merchants, residents of Shanghai, had contributed the sum of 525 taels, or about \$680, for the purchase of a fount of Chinese type for the Society, no such fount being hitherto anywhere to be found upon the western continent. The sum was transmitted by Mr. Bradley in the form of a draft on London, at six months' sight, for £158,14,8, which, as had been already announced by the Treasurer, was in the hands of Messrs. Barings for collection. The matter of purchasing the type had not yet been arranged, and would probably be deferred until the return to this country of Mr. Bradley, who was now in Europe, on his way home. The names of the liberal donors would be later presented by the Directors, in order to their election as Corporate Members for life of the Society.

5. Report of the Directors.

The Directors reported that they had fixed upon New York as the place for the semi-annual meeting in October next, and had appointed Prof. J. J. Owen of New York, and Prof. W. H. Green of Princeton, with the Corresponding Secretary, to be the Committee of Arrangements, leaving the day for the meeting to be determined by them on consultation. They also nominated for election into the Society, as Corporate Members, the following gentlemen, to whom the Society is indebted for funds to purchase a fount of Chinese type, as noticed in the Treasurer's report and in the correspondence read, namely :

Mr. Edward Cunningham, of Shanghai.
Mr. George B. Dixwell, " "
Mr. William Endicott, " "
Mr. Frank B. Forbes, " "
Mr. Henry Leighton, " "
Mr. E. M. Smith, " "
Mr. George W. Talbott, " "
Mr. J. F. Twombly, " "

and, for election as Corresponding Members, the following :

Prof. G. I. Ascoli, of Milan.
Rev. Daniel Bliss, of Beirut.
Prof. Cotton Mather, of London.

These nominations were afterwards acted upon by the Society, and the persons named unanimously elected to membership.

All reports having been disposed of, a Committee consisting of Prof. F. H. Hedge of Brookline, Rev. C. H. Brigham of Taunton, and Mr. J.

S. Ropes of Boston, was appointed to nominate officers for the ensuing year: on their recommendation, the Society re-elected its whole board of officers, as follows:

<i>President</i> —Prof. EDWARD E. SALISBURY,	of New Haven.
<i>Vice-Presidents</i> { Prof. CHARLES BECK, Ph. D.,	" Cambridge.
Rev. WILLIAM JENKS, D. D.,	" Boston.
Pres. T. D. WOOLSEY, D. D., LL. D.,	" New Haven.
<i>Corresp. Secretary</i> —Prof. W. D. WHITNEY, Ph. D.,	" New Haven.
<i>Secr. of Classical Section</i> —Prof. JAMES HADLEY,	" New Haven.
<i>Recording Secretary</i> —Mr. EZRA ABBOT,	" Cambridge.
<i>Treasurer</i> —Prof. D. C. GILMAN,	" New Haven.
<i>Librarian</i> —Prof. W. D. WHITNEY,	" New Haven.
Rev. RUFUS ANDERSON, D. D.,	" Boston.
Mr. J. G. COGSWELL, LL. D.,	" Cambridge.
Prof. W. H. GREEN, D. D.,	" Princeton.
<i>Directors</i> { Prof. J. J. OWEN, D. D.,	" New York.
Prof. A. P. PEABODY, D. D.,	" Cambridge.
Dr. CHARLES PICKERING,	" Boston.
Prof. JOHN PROUDFIT, D. D.,	" New Brunswick.

The Society then attended to the reading of papers presented, of which the following brief abstracts are given: the first eight papers having been read on Wednesday, morning or afternoon, and the others on Thursday, May 19th.

1. Saracenic Remains of Constantinople; by Mr. John P. Brown, Interpreter to the United States Embassy at the Ottoman Porte.

Under this title Mr. Brown communicates some historical notices of three ancient mosques at Galata, translated from the Turkish. The oldest which he mentions, named Arab Jamiyyah, is said to have been built with the booty taken by the Muslims in their conquest of "ten cities in the country of Room," under Maslamah, whom his father, the Khalif 'Abd al Mâlik, sent to invade the Byzantine empire in the 66th year of the Hijrah. But when, after several years, Maslamah had been recalled by the Khalif 'Umar Bin 'Abd al-'Aziz, the Greek emperor occupied Galata, and this mosque became a Christian church. Long afterwards, Sultan Muhammad II., on his taking of Constantinople, in A.H. 857, restored it to its primitive use. Another edifice spoken of, partly of early Muslim origin, is the mosque called Kurshunli Mahsen, or the Leaden Magazine, erected by the Grand Vizier of the Sultan Mahmûd I., in A.H. 1066, over a vault in which the Maslamah above named is said to have buried the remains of several eminent Muslims and much valuable property, before leaving Constantinople at the call of 'Umar II., "pouring molten lead into the locks, so as to prevent their being opened—which circumstance gave name to the edifice still existing there." The third edifice of which this paper contains notices is the mosque of Abû Aiyûb, so called from one of the Companions of the Prophet Muhammad, who accompanied an expedition of the Muslims against Constantinople in the reign of Mu'awiyah, and died there, and was buried on the spot where this mosque stands, near the head of the Golden Horn, towards the middle of the 52d year of the Hijrah. The mosque, however, dates from the reign of Muhammad II., who discovered the spot through "the holy powers" of a Derwish shaikh. Here the Ottoman sovereigns are accustomed to gird on the sword, at their accession.

Of these edifices, the first named must be the most interesting to the antiquary: and it is to be regretted that our correspondent has not given us any architectural description of so early a specimen of the building-art of the Muslims. The mosque of Abû Aiyûb, being not later than the fifteenth century, might also well deserve to be studied architecturally as well as historically.

2. Manetho's Autograph in the Royal Museum at Turin; by Prof. Gustav Seyffarth, of New York.

This paper commences with a notice of Manetho's Egyptian history, written by him in Egyptian and subsequently translated into Greek, and of the extracts and excerpts made from it by authors of the first three Christian centuries, and which have long been supposed to be the only extant remains of it. Dr. Seyffarth then proceeds to describe his examination and arrangement, in 1826-7, at Turin, of the famous papyrus containing a list of the Egyptian kings, and gives a succinct account of its contents, comparing them with the extracts from Manetho. He maintains that this papyrus is Manetho's history itself, and the author's autograph copy, founding his opinion on the agreement between the contents of the two works, the character of the hieratic letters in the papyrus, agreeing with that usual at Manetho's period, and the alterations made here and there in the text, which he claims to be such as an author, and not a copyist, would make. Dr. Seyffarth exhibited to the Society his original copy of the document, with Champollion's (autograph) attempts at giving the phonetic value of the characters interlined in pencil, and went on to expose the principles of his own method of reading the hieroglyphs, understanding each character to express phonetically the consonants contained in the Egyptian name of the object which it represented, and he held that Champollion's method, which regarded the characters as variously phonetic, ideographic, determinative, and so on, could lead to no satisfactory interpretation of Egyptian texts. These views he illustrated by a number of examples. Finally, he inquired what were the benefits derivable from this ancient document, and stated them to be the following: 1. the confirmation of the key to the astronomical monuments of the Greeks and Romans; 2. the reconciliation of Egyptian and Scriptural chronology; 3. the confirmation of Josephus's view that the Hyksos, or shepherd-kings, were the same with the Israelites, who occupied the land of Goshen, and governed it, under the kings of Lower Egypt; 4. its bearing on the question of the true explanation of the hieroglyphs.

3. Explanations by Prof. Lepsius, of Berlin, with reference to a criticism on his Standard Alphabet by Prof. Whitney.

This communication was a letter from Prof. Lepsius to the Corresponding Secretary, containing detailed explanations respecting points in the former's Standard Alphabet, or in the phonetic theories on which it is founded, touched upon by the latter in his paper presented to the Society two years and a half ago, and published in Vol. vii., No. 2, of the Society's Journal. The letter was read by the Secretary, with accompanying comments, criticisms, and explanations of his own; all are to be published together in the next Number of the Journal, and the matter is so much one of details that no satisfactory account can be given of it here, by way of anticipation. Regret was expressed that there were not more gentlemen present at the meeting to whom the question of such an alphabet had been a practical one, that they might have aided in estimating its character and value.

4. On the Jewish Ban; by Rev. Charles H. Brigham, of Taunton, Mass.

The facts of Mr. Brigham's paper were in large measure furnished by Rabbi Wiesner, a German Jew. The history of the Ban commences in the century just preceding the advent of Jesus. No mention is made of it in the Hebrew Bible, nor is there any statute of Moses which seems to enjoin or authorize it. It was the necessary resort of a ruling class, deprived of all civil and secular jurisdiction. The ban began when the Roman power had deprived the Jews of the privilege of administering all penal law. In the Rabbinical age, its use was not very frequent or general. In the time of the Amoraim, from the 2d to the 6th century, it was much more general and formidable. In the subsequent age of the Gaonim, its power still increased; but since the beginning of the 18th century, the age of Maimonides, it has been steadily declining, until in the civilized states of Europe it is hardly used at all, or recognized as legitimate.

The various forms taken by the ban in the course of its history were described: the *Nesifah*, or temporary ban; the *Nidui Schamta*, or lesser ban; and the *Cherem*, or greater ban. The list of offences, ecclesiastical, moral, and social, punished by

these several kinds of excommunication, fixed in the 3d century at twenty-four, was enlarged in later ages. An account was given of the method of administering the ban; of the persons authorized to use and apply it; of the reach and degree of its influence and binding force, sometimes partial, sometimes universal; of its effect in the ordering of scrupulous consciences; of the most eminent subjects of the punishment, from Akabiah in the time of Herod the Great down to Rabbi Frankl, the living traveler and poet; of the difficulties attending the administration of the ban; and of other collateral questions. The arguments of Mendelssohn against the ban were stated.

5. The Historical Accounts of the Death of Claudius; by Prof. George M. Lane, of Cambridge.

After discussing the authorities on this subject, Prof. Lane spoke of the erroneous ideas of some writers that the emperor died at Sinuessa, and more particularly of Mr. Merivale's notion that before his death he was in a decline, and was sent by Agrippina to Sinuessa. The source of this error was an interpolation in the text of Tacitus, resting on no manuscript authority of any weight, and the true text was confirmed by the independent testimony of Dion. He thought furthermore that, in consequence of his preconceived theory of the decline of Claudius, Mr. Merivale had misinterpreted the language of Tacitus, and had unnecessarily questioned his statements.

6. The Place of the English among the Indo-European Languages; by Prof. Rudolph L. Tafel, of St. Louis.

The author of this paper, first assuming the well-established principle that the history of a language is the counterpart of the history of the people who speak it, directs attention to the fact that, as Europe is now parcelled out among nations, the Teutonic occupy the northern side, and the Romance the southern, while the Slavonians, Lithuanians, and descendants of Finnish or Tatar tribes, lie in the rear. He then unfolds the characteristic points of difference between "the modern dominant nations," the Teutonic and the Romance:—the former representing, in general, the Greeks of the ancient world, explorers in new regions of thought, having a tendency to divergence, intellectually and civilly, colonizers; the latter representing the Romans, systematizers, organizers, precise in defining and practical in applying given ideas; but he regards each of these families of nations as providentially destined, by separately developing its distinctive peculiarities, to work out a higher perfection of the race. The physical conformation of Europe is, next adverted to, as indicating a divine intention that Great Britain should "invite the two most highly gifted representatives of the Indo-European family, the German and the French, to transfer thither their individual excellencies, and to constitute a nationality which should possess the depth of the one and the external graces and aptitude of the other;" and the English language is spoken of as an exponent of this combination of nations. Certain "conditions under which the marriage of the German and French languages in Great Britain became effected" are then specially considered: such as that it took place on Celtic ground, whereby the Anglo-Saxon is believed to have been first broken up, and rendered more receptive of French elements; that the French language was brought to England, not by the romanized Gauls, but by the Normans, a people more akin to the Anglo-Saxon, "in whom the native German and Gothic genius had not yet been completely drowned by the French spirit;" and that the amalgamation was wrought out between nations which maintained for some time the attitude of mutual hostility, preventing one from being completely overborne by the other.

In a digression from his main subject, the writer takes occasion, here, to show the danger of generalizing from particular cases, in respect to the mutual influence of nations brought into contact with each other, as conquerors and conquered. "A unique example," he then goes on to say, "in the history of languages is furnished by the English. For while, in all other countries, whenever one people were suppressed by another, either the conquerors adopted the language of the conquered, or the conquered that of the conquerors, in England such is not the case. For it can neither be said that the Anglo-Saxon language was superseded by the French, nor that the French was superseded by the Anglo-Saxon; but both entered into a

new combination, and produced a new language, as the expression of a new people." So that the English, and their descendants in America, however they may pride themselves in the name, are no more Anglo-Saxons than Normans; just as water is neither oxygen nor hydrogen. In the last part of his paper, our correspondent shows the history of the Indo-European race to have been a history, first, of disruption into nations and tribes, "to set free the hidden energies and powers of the race, and, by separating each from another, to develop its innate character and faculties, so as to enable it to perform the functions allotted to it in the general advancement of the race," and then of consolidation, "each tribe contributing for the general good the riches it had acquired during its separate existence;" and comes back to his subject with the remark that a consolidation of all the separate nationalities and languages included under the name of Indo-European may be said to have begun in England, and to be actually in the process of being carried out, on a large scale, in the United States of America. He concludes with an intimation of the probable glorious future, of extension and influence, in reserve for the English-speaking people and their language.

7. Critique on a Text of Thucydides (i. 22); by Prof. William W. Goodwin, of Cambridge.

Prof. Goodwin remarked that the sentence *δοιοι δὲ βουλήσονται . . . ἔσεσθαι ὠφέλιμα κρίνειν αὐτὰ ἀρκούντως ἔξει* is given up by Krüger as hopeless. It is commonly pointed with a comma after *ἔσεσθαι*, and rendered, 'I shall be well content, if so many as shall wish, etc., judge my work to be profitable.' But Dionysius Halic. (Art. Rhet. xi. 2, p. 398, R) quotes this sentence as signifying (what is not to be found in that rendering) that "History is Philosophy teaching by examples." To obtain this sense, we must put the comma after *κρίνειν*, and interpret *τῶν μελλόντων ἔσεσθαι ὠφέλιμα κρίνειν* 'to draw useful inferences with regard to future events.' Here *ὠφέλιμα κρίνειν* (*ὠφέλιμα* as cognate accusative) may be considered equivalent to *κρίσεις ὠφέλιμους κρίνειν*; comp. *κρίσιν κρίνειν* (Plato, Rep. II. 360 E) and *δικαίαν κρίσιν κρίνετε* (John, vii. 24). The text of Dionysius, which has been regarded as corrupt, seems to want only the word *κρίνειν* to complete the construction, although, as it stands, there can be no doubt as to the meaning.

8. Notice of Sulaimân Effendi's Book of First Ripe Fruit, disclosing the Mysteries of the Nusairian Religion (*كتاب الباكورة السليمانية في كشف أسرار الديانة النصيرية*), with Extracts; by Mr. Edward E. Salisbury, of New Haven.

This tract, lately printed at Beirût, was introduced with some remarks on the interesting character of its contents, and its origin and trustworthiness; and an abstract of sixty pages of the advance sheets, sent to this country through the courtesy of Dr. Van Dyck, missionary at Beirût, was laid before the Society. But the impossibility of reading the whole paper obliged the writer to limit himself to a statement of some of the points of special interest in the tract, with illustrative extracts, although he could not in this way do justice to the abundance of original documents and valuable explanations contained in it, relative to the rites, doctrines and history of the Nusairis. The work is divided into sections: of which the first describes the author's initiation into the mysteries of this sect, and embraces what purports to be a complete Nusairian prayer-book, with important explanations and historical notes; the second is chiefly an enumeration of some of the principal fêtes of the sect; the third gives a detailed report of the ceremonies observed, and the liturgical forms used, on those occasions, and includes some statistics of the sect; and the fourth, of which only the commencement is contained in the sheets as yet received from Beirût, treats of the Nusairian doctrine of the Fall.

1. It was observed that this tract first gives us some distinct statements respecting the historical origin of the sect of the Nusairis, showing that it sprang up, not later than A. D. 878, which was in the time of the Abbaside Khalîf Mu'tamid-'al-'Allâh, under the influence of Abû Shu'aib Muḥammad Bin Nuṣair al-'Abdî al-Bakrî an-Nusairî, from whom, evidently, the sect derives its name; and that it represents

one of those associations of rebels against the ruling power, all either really or pretendedly partizans of the descendants of Muhammad through 'Ali, which so much disturbed the later Abbasides. A controlling influence in the development of its doctrine, however, was shown to have come from Persia, through al-Khwasibî, who first reduced the Nusairian prayer-book to its present form; and the opinion was expressed that the Sabian elements of the religion were thence derived. Evidence was also given to show that some acquaintance with Greek philosophy contributed to mould the religion of the Nusairis, and that Christian doctrines and forms, and the Old Testament Scriptures, as well as Cabbalistic speculation, had all been borrowed from, while at the same time the profession of Islâm was maintained; all the peculiarities of the Muhammadan system, however, together with the historical facts on which it rests, were travestied and perverted by figurative interpretation and misapplication.

2. Special notice was taken of the doctrine of the supreme divinity of 'Ali, and of the Nusairian Trinity, as set forth in this tract. As to the latter point, it was remarked that no doctrine of a Trinity is here explicitly laid down, except in a note which the author appends to one of the forms of the prayer-book. "In that form we read as follows: 'I testify that my sovereign is the Prince of Bees [i. e. of the angels], 'Ali, who produced lord Muhammad out of the light of his essence, and called him his Expression, his self, his throne, and his seat, and named him with his own attributes; who is connected with him, not separate from him, nor yet veritably connected, while not widely separate—being connected with him by virtue of light, separate from him by manifested presence, so that Muhammad is of him like as the soul's feeling is of the soul, or as rays of the sun are of the sun's disk, or as the gurgling of water is of water, or as ripping comes of sewing, or as the lightning-flash is of lightning, or as sight is of the seer, or as motion comes of rest. . . . I also testify that lord Muhammad created lord Salmân out of the light of his light, and appointed him to be his Communicator, and the bearer of his revelation. . . .'" On which the author observes that to the leaders of the Nusairis 'Ali, Muhammad, and Salmân are "their most holy Trinity;" and in the Nusairian formulas frequently occurs a representation of the Deity as triune, by a combination of the initial letters of those three names—a representation allied to the Cabbalistic tetragrammaton. The language above quoted, so far as it respects the relation of Muhammad to 'Ali, was referred to as bearing a resemblance to the original Nicene article on the Second Person of the Trinity: "begotten of the Father, only begotten, that is to say, of the substance of the Father, God of God, Light of Light, begotten not made, being of one substance with the Father," and the relation of Salmân, the Nusairian "representative of order and indubitable truth," to Muhammad, was spoken of as being, substantially, what a doctrine of the procession of the Spirit, "who spake by the prophets," from the Son would be among Christians. With regard to the humanity of 'Ali, the Nusairis hold that he assumed a "man-like form," as the expression is, "in order to manifest the essential light, besides which there is no God," that is, himself, "the undescribed, illimitable, incomprehensible, inscrutable."

3. Allusion was also made to the existence of four parties among the Nusairis, namely: worshippers of the heavens in general, of the moon, of the twilight, and of the air, respectively, as representations of 'Ali. But that a ground of separation existed independently of any difference of choice as to the specific Sabian symbol which should be appropriated to 'Ali, was suggested as a reasonable conjecture; and the belief was expressed that the so called Kalâzians, or worshippers of the moon, represent those original partizans of 'Ali who were the prime progenitors of the Nusairian sect, while the Northerners, as they are called, who adore the heavens in general, are the more special representatives of the Sabian and other elements of faith introduced from Persia.

4. The Sabianism of the Nusairis was then more fully explained, by reading all that has been received of the author's last section, on the fall of man, setting forth a pre-existent state of consciousness and moral responsibility, which pertained to men as revolving stars, as well as other passages of the tract, which speak of being disencumbered of the flesh, and "clothed with vestments of light, amid the stars of heaven," as the goal of human aims and endeavors, and as attainable by knowledge of 'Ali, primeval bliss having been lost by the obscuration of that knowledge

through self-conceit. But it was noticed that, sometimes, this final felicity is exhibited under imagery which betrays an adoption of the grosser Muhammadan anticipations of Paradise.

6. Attention was called to the fact that in this publication we have all three of the Nussarian masses which were published in 1848 by the German Oriental Society, beside one in addition; and that the copies then made use of are proved to have been much mutilated, and unworthy to be relied upon.

9. The Grand Sanhedrim of 1807; by Rev. Charles H. Brigham, of Taunton, Mass.

In connection with a notice of the work of M. Bedanide, Mr. Brigham read a paper on the Grand Sanhedrim of 1807, the Jewish assembly gathered by Napoleon in Paris for the purpose of deciding by authority certain doubtful questions of the relation of Jewish practice to the duties of citizenship and to the public law. The preliminary assembly of delegates from the synagogues, Rabbins and laymen, with their discussions and their decrees, was described at length; the reasons were stated which led to the call for the larger assembly; and sketches were given of some of its leading Rabbins and debaters. The results of the Sanhedrim were, that the Jew was declared to be a proper subject of the State in which his lot was cast, liable to the duties of citizenship, both civil and military, amenable to its laws, with not only the right, but the duty, of labor in any useful calling; marriage with Gentiles was declared to be valid; usury upon a Gentile as bad as usury upon a Jew; and, except in the difference of faith and worship, all distinction between Jew and Gentile was virtually annulled. The decrees of this Sanhedrim were pronounced as binding upon all the Jews of France and Italy. The paper closed with a general account of the present position of the Jews in Europe, and a notice of numerous Hebrews of the present century, living and dead, eminent in the various departments of science, art, literature, and statesmanship.

10. Principles of English Etymology; by Prof. Rudolph L. Tafel, of St. Louis.

After enumerating the languages from which the English is derived, and assigning their respective rank and importance as sources of English words, Prof. Tafel observes that it is almost always easy to recognize the words which have come to us from the French, the Latin, or the Greek. It is far more difficult to distinguish between words that belonged to the primitive Anglo-Saxon, or rather Low German, and those which have been added from Scandinavian or Celtic sources. For this purpose, Prof. Tafel lays down a series of criteria, and illustrates them by copious examples. All words which occur either in Low German dialects or in High German, must be regarded as having come to us from the Low German: thus, to *crimp*, *mesh*, *pan*, *ridge*, to *grumble*, to *puzzle*, *dainty*, with many others, which have sometimes been referred to a Celtic origin. Words which are found in Scandinavian dialects, but neither in Low nor in High German, have come to us from the Scandinavian: as, to *bless*, *boon*, *eager* or *egre* (flood), *flitch*, to *crave*, *tool*, to *wrest*, *wile*, *bristle*, *clout*, *goad*, *gad-fly*, *kiln*, *pocket*, to *rive*, to *wheeze*, *colt*, *fog*, *gale*, *gust*, *gain*, to *fluster*, *kid*, *ill*, to *ransack*, *skill*, to *waft*: so, too, *bulk*, *crooked*, *flaw*, *hap*, to *lurk*, *mugger*, to *slie* (strain), *huff*, though found also in the Celtic. Words which occur in Celtic dialects, but neither in German (Low or High) nor in Scandinavian, have come to us from the Celtic: thus, *addle*, *balk* (strip of green-sward), *brat* (rag), *breck* (pottage), *cobble* (fishing-boat), *cod* (husk), *comb* (upper part of valley), *cradle*, *glengore*, *mattock*, *riddle* (sieve), *slough*, *snite* (snipe), *soot*, — *agog*, *babe*, *bald*, *bard*, *basket*, *bodkin*, *bother*, *bragget* (sweet drink), *bran*, *breeze* (disturbance), *briak*, *briaket*, *brog* (pointed steel instrument), *bug*, *bugbear*, *bump* (stroke), *bump* (cry of bittern), to *cade* (bring up tenderly), *cairn* (stone-heap), *cam* (crooked), *carol*, to *carouse*, *catch-poll*, *chine*, *clan*, *claud* (ditch), *cloak*, to *clutter*, *cob-irons*, to *cobble*, to *cocket* (fandle), to *cog* (lie, flatter), *cool*, *coracle* (fishing-boat), *costrel* (bottle), to *conner*, *crag*, *creel* (basket), *crummet*, *erut* (dwarf), to *cully* (cheat), *cur*, *curds*, to *curry* (beat), *catty* (short), *cuts* (bits), to *darn*, *daub*, *dodds* (sulks), *drill* (seed-furrow), *druid*, *dudgoun*, *duise*, *fast* (quick), *filly*, *flannel*, to *flash*, *flasket*, *flummery*, *fog* (after-grass), *freak*, *frum* (full, fat) to *frump* (flout), to *fudge*, *fugleman*, *gimp* or *jimp* (spruce), to *gird* (strike), to *glaver* (flatter), *goal*, *goggles*, *gooseberry*, *gorbelly* (big belly), to *grome*

(grind the teeth), *gridiron*, *griddle*, *gull*, *gullion* (mean wretch), *gully* (knife), *gully* (water-channel), *gullet* (small stream), *gyve*, *harlot*, to *hawk* (clear the throat), to *hitch* (hobble), *hog*, *hoyden*, to *hoot*, *hopper*, to *hover*, *hubbub*, *hub*, *inch* (small island), to *jog*, *kenneel*, *kez* or *heckey* (of hemlock), *kibe* (ulcerated chilblain), to *kick*, *lad*, *lass*, *maggot*, *map*, *mug* (face), *nook*, *odd* (strange), *palaver*, *pale* (ditch), to *pall*, *peat*, *peel-house*, *perk*, *pert*, *piggin* (wooden vessel), to *pitch* or *pick* (throw), *plait*, *pole*, *posset*, to *pot* (tipple), *quagmire*, *quaint*, to *quash*, *quibble*, *quip*, *quirk*, *ran* (hank of string), *rasher*, *reel* (dance), to *rug* (pull), *rule*, *scall*, to *scud*, *scut* (tail of hare), *sham*, *siz* (glue), *skeen* (knife), *slogan*, *sock*, *sough* (sink), *spigot*, *spink* (finch), *squib*, *strath* (valley), to *ted* (spread hay), *tinker*, to *tinkle*, to *toll* (deceive), to *toss*, to *trip* (stumble), *truck* (wheel), *tuck* (small sword), *tump* (knoll), to *wait*, to *wamble* (waddle), *wanton*, *whap* (blow), *whiff*, *whiskey*, *wornal* (tumor on cattle). Where an English word could be explained both from the Celtic and from the French, it has generally come to us from the French—always so if the French word has a clear Latin or German etymology: but if our word is nearer in form to the Celtic, and signifies something which was known in England before the Norman time, it must be regarded as coming from the Celtic; thus, *bran*, *barrel*, *gaff*, *gown*, *trussel*, *trivet*, *trousers*. Where an English word appears both in the Teutonic and in the French, the form generally shows from which of these it has come into our language.

11. Oriental Spiritualism; by Mr. John P. Brown, of Constantinople.

In this paper, "deduced," as Mr. Brown says, "from the writings of Muhi ad-Din," a Spanish Arab Sūfi, who died about the middle of the 13th century, an outline is given of a theory of spiritual influence akin to the pretensions of the so-called Spiritualists of our day. The theory depends upon a certain view of the relation of the spiritual to the corporeal part of man, namely, that, while the body connects him with the outward and visible, and is the avenue of access to him of all moral evil, the spirit "connects him with the Divine Spirit of which it is an emanation," suffers no corruption through sin, and tends ever to its source. Being thus perpetually in unison with its divine original, "just as the light of the sun remains connected with its source," the human spirit is supposed to be capable, by its power of will, of putting forth influence upon the animal and inanimate creation, so as to produce supernatural occurrences, like as the Spirit of God, moving upon the waters, evoked the creation from chaos. "It is believed that man, by the mysterious power of the will, can influence and put into action, not only any portion of his own body, but also the persons of other men, and all animate, as well as inanimate, bodies." This faculty is "in some stronger than in others, and the weaker are submissive to, and may readily be influenced by, the stronger. The distinction may be best understood by the terms 'active' and 'passive,' and the influence of the former can be exerted over the latter even as well when they are separated as when they are together. In the exertion of its influence, the former penetrates the latter, which then becomes, as it were, annihilated into the former, and possessed by it." But the spiritual part of man is also receptive of supernatural influence from kindred spirits: as, for example, in a trance, when, the corporeal senses of the subject being lulled into inaction by a natural or unnatural slumber, the will of some spirit other than its own transports it to distant places, or sets before it scenes wholly strange; or in waking hours, when the senses are lulled into repose, and the spirit of man, knowing neither time nor space, like the Divine Spirit, wanders in search of kindred spirits, and finds exquisite happiness, or intense suffering, in such communion; and supernatural communications from God are represented as being generically allied to those which one human spirit may thus make to another. Through the same spiritual knowledge by which man is brought back to his Creator, he receives revelations; and those who attain to the most eminent degree of insight into divine truth actually become absorbed in the Deity.

Prof. Whitney was to have read a paper on the Origin of Language, but, for want of time, was led to defer it to another occasion.

The thanks of the Society were voted to the American Academy of Arts and Sciences, for the use of its room, and the Society then adjourned, to meet in New York in October, on the day which should be determined upon by the Committee of Arrangements.

ADDITIONS TO THE LIBRARY AND CABINET.

NOVEMBER, 1862—MAY, 1864.

From the American Academy of Arts and Sciences.

Memoirs of the American Academy of Arts and Sciences. Vol. viii, Part 2. Boston: 1863. 4to.

Proceedings of the American Academy of Arts and Sciences. Vol. iv, pp. 249-457; vol. v, pp. 313-457; vol. vi, pp. 1-96. Boston: 1862-3. 8vo.

From the American Antiquarian Society.

Proceedings of the American Antiquarian Society. . . . Oct. 21, 1862. Boston: 1862. 8vo.

From the American Philosophical Society.

Transactions of the American Philosophical Society. Vol. xii, Parts 1, 2, 3. Philadelphia: 1862-3. 4to.

Proceedings of the American Philosophical Society. Vol. ix, pp. 1-288. Philadelphia: 1862-3. 8vo.

From Prof. G. I. Ascoli, of Milan.

Studj Critici di G. I. Ascoli, etc. I. Milano: 1861. 8vo.

From the Asiatic Society of Bengal.

Journal of the Asiatic Society of Bengal. 1852, Nos. 5, 6; 1853, Nos. 1-5, 7; 1854, Nos. 4, 5; 1856, Nos. 3, 5; 1857, No. 3; 1858, No. 1; 1859, No. 1; 1861, Nos. 2-4; 1862, Nos. 1, 2, 4, 5. Calcutta. 8vo.

Bibliotheca Indica. Nos. 43-46, 49, 50, 52-57, 62-77, 81-93, 95, 96, 98-124, 127-142, 146-149, 156-174; and New Series, Nos. 26-29, 34-37; viz:

The Uttara Naishadha Charita, by 'Sri Harsha, with the Commentary of Nārāyaṇa. Edited by Dr. E. Röer. Fasc. iv-xii.

The Taittirīya, Aitareya, 'Svetāsvatara, Kena, I'sā, Katha, Pras'na, Mundaka, and Māṇḍukya Upanishads. Translated from the original Sanscrit. By Dr. E. Röer. Fasc. ii.

The Brihad A'ranyaka Upanishad, and the Commentary of S'ankara A'chārya on its first chapter, translated from the original Sanscrit by Dr. E. Röer. Fasc. iii.

The Sūrya-Siddhānta, an Antient System of Hindu Astronomy; with Ranganātha's Exposition, the Gūdhārtha-Prakās'aka. Edited by Fitz-Edward Hall, etc. Fasc. ii-iv.

The Taittirīya Brāhmaṇa of the Black Yajur Veda, with the Commentary of Sāyanāchārya, edited by Rājendralāla Mitra, etc. Fasc. iii.

The Mārkaṇḍeya Purāṇa, in the original Sanscrit, edited by Rev. K. M. Banerjee, etc. Fasc. i-v, vii.

The Aphorisms of the Vedānta, by Bādarāyaṇa, with the Commentary of Sāyana A'chārya and the Gloss of Govinda A'nanda. Edited by Dr. E. Röer. Fasc. i-iv, vi, vii.

The Sanhitā of the Black Yajur-Veda, with the Commentary of Mādhava A'chārya. Edited by Dr. E. Röer and E. B. Cowell, etc. Fasc. i-xiv.

The Vāsavadattā, a Romance by Subandhu; accompanied by 'Sivarama Tripathin's perpetual Gloss, entitled Darpaṇa. Edited by Fitz-Edward Hall, etc. 3 Fasc.

The Sāṅkhya-Pravacana-Bhāṣhya, a Commentary on the Aphorisms of the Hindu Atheistic Philosophy; by Vijnāna Bhikṣu. Edited by Fitz-Edward Hall, etc. Fasc. iii.

Sarvadarmāna Sangraha; or an Epitome of the different Systems of Indian Philosophy. By Mādhavāchārya. Edited by Paṇḍita I's'warachandra Vidyāsāgara, etc. 2 Fasc.

- The Nārada Pancharātra. Edited by Rev. K. M. Banerjee. Fasc. iii.
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 Hindu Astronomy II. Translation of the Siddhānta 'Siromani, by the late Lan- celot Wilkinson, etc. Fasc. ii.
 The Sāhitya Darpaṇa, or Mirror of Composition: a treatise on literary composition, by Viś'vanātha Kavirāja. . . . Fasc. iii-v.
 A Dictionary of the Technical Terms used in the Sciences of the Musalmana. Edited by . . . Dr. A. Sprenger. Fasc. ii-xix, and first appendix. 4to.
 The Conquest of Syria, commonly ascribed to Abū 'Abd Allah Mohammad B. Omar al-Wāqidī. Edited, with notes, by Wm. N. Lees, etc. Fasc. ii-viii.
 Tusy's List of Shy'ah Books and 'Alam Alhodā's Notes on Shy'ah Biography. Edited by Dr. A. Sprenger and Mawlawy 'Abd al-Haqq. Fasc. ii-iv.
 A Biographical Dictionary of Persons who knew Mohammad, by Ibn Hajar. Edited, in Arabic, by . . . Dr. A. Sprenger. Fasc. ii-xiii.
 Khirad-Nāmahē Iskandary . . . by Nitzāmy. Edited by Dr. A. Sprenger and Aga Mohammed Shoostere. Fasc. i.
 Soyūty's Itqān on the Exegetic Sciences of the Qorān. Edited by the Mowla- wies Sadeedood-Deen Khan and Basheerood-Deen . . . Fasc. i-x.
 The Fotooh al-Sham: being an account of the Moslim Conquests in Syria. By . . . al-Baqrī . . . Edited, with a few notes, by Ensign W. N. Lees, etc. Fasc. i-iv.
 History of Muhammad's Campaigns, by . . . al-Wākidī. Edited by Alfred von Kremer, etc. 5 Fasc.
 The Nokhbat al-Fikr and Nozhat al-Nazr. By . . . Ibn Hajar al-'Asqalani. Edited by Capt. W. Nassau Lees, etc. 1 Fasc.
 The Tārīkh-i Baihaki, containing the Life of Masaūd, son of Sultān Mahmūd of Ghaznī. . . . By Abūl Fazl al-Baihaqi. Edited by the late W. H. Morley, etc. Fasc. v-viii.

From the Asiatic Society of Paris.

- Journal Asiatique . . . 5^{me} Série. Tomes xvii-xx. 6^{me} Série. Tomes i, ii, 1, 2. Paris: 1861-3. 8vo.

From the Royal Academy of Sciences at Berlin.

- Philologische und Historische Abhandlungen der Königlichen Akademie der Wis- senschaften zu Berlin. Aus den Jahren 1861, 1862. Berlin: 1862-3. 4to.
 Monatsberichte der Kon. Ak. d. Wiss. zu Berlin. Aus den Jahren 1861, 1862. Berlin: 1862-3. 8vo.

From Bhao Daji, Esq., of Bombay.

- Vālmiki's Rāmāyaṇa, with Rāma's Commentary, called Tīlaka. In Indian manu- script form and style. Bombay: 1859. long fol., about 2200 pages.

From Prof. Otto Böhtlingk, of St. Petersburg.

- Indische Sprüche. Sanskrit und Deutsch herausgegeben von Otto Böhtlingk. Er- ster Theil. St. Petersburg: 1863. 8vo.

From Profs. Böhtlingk and Roth.

- Sanskrit Wörterbuch, herausgegeben von der Kaiserlichen Akademie der Wissen- schaften. Bearbeitet von Otto Böhtlingk und Rudolph Roth. Lieferungen 22-25. St. Petersburg: 1862-3. 4to.

From Hon. C. W. Bradley, late of Hankow, China.

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 Philadelphia.
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 Philadelphia.
 Cambridge, Mass.
 Shanghai.
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 So. Amherst, Mass.
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 Theol. Sem'y, Fairfax Co., Va.
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 New Haven.
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 Richmond, Va.
 Andover, Mass.
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 Newport, R. I.
 New York.
 New York.
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 Hartford, Conn.
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 Tuscaloosa, Ala.
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 Shanghai.
 Rochester, N. Y.
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 Onondaga Valley, N. Y.

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Rev. HENRY BALLANTINE,	Missionary at Ahmednuggur, India.
Rev. CEPHAS BENNETT,	Missionary at Rangoon, Farther India.
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Rev. JUSTIN PERKINS,	Missionary at Seir, Persia.
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Their Majesties, the First and Second KINGS OF SIAM.	

American Oriental Society:

Proceedings at New York, October 26th and 27th, 1864.

The Society held its Semi-annual Meeting for 1864 in the city of New York, commencing on Wednesday, October 26th. The members came together at 3 o'clock in the afternoon, and, in the absence of the President (who was detained at home by illness) and of all the Vice-Presidents and the Recording Secretary, were called to order by the Corresponding Secretary. Prof. J. J. Owen, D.D., of the New York Free Academy, being the oldest Director present, was chosen Chairman of the meeting, and Prof. James Hadley of New Haven was made Recording Secretary *pro tempore*.

After the reading of the minutes of the last meeting, the Committee of Arrangements announced the order of the session, as proposed by them and ratified by the Directors. The evening session of the day, partly literary and partly social, would be held at the residence of Prof. Howard Crosby, D.D., and the Society would meet again at 9 o'clock on Thursday morning for the despatch of business.

The Directors gave notice that the next meeting would be held in Boston, on Wednesday, May 17th, 1865, and that the Committee of Arrangements for it would be the same as last year.

They further informed the Society that they had transferred to the list of Corporate Members the names of

Hon. Charles William Bradley, late of Hankow, China,
and Prof. Fitz-Edward Hall, D.C.L., of London,

as Corporate Members for Life, on account of distinguished services to the Society, and generous gifts to its Library and Cabinet, due statement of which was made to the meeting, in connection with the announcement.

The correspondence of the past six months was next presented and read in part. Acceptance of corporate membership had been received from

Prof. Austin Stickney, of Hartford, Conn.,
Rev. William Silsbee, of Cambridge,
Rev. Samuel Johnson, of Salem, Mass.,
William A. Wheeler, Esq., of Dorchester, Mass.,

and of corresponding membership, from

Prof. Edward B. Cowell, of Calcutta.

Among the extracts from letters read were the following :

Rev. Charles R. Hale, of the Naval Academy at Newport, writes under date of Oct. 22, 1864 :

.... "I have been making some investigations respecting the Dighton inscription, and writing a little essay upon it, at the request of the Commodore, to put, with an elaborate drawing of the stone, in the Academy library. I am sorry to say that I was unable to continue in the belief I tried to hold of its Scandinavian origin: I think it Indian, though not satisfied with Schoolcraft's interpretation." . . .

Rev. Lewis Grout, late of the Zulu Mission, dated Feeding Hills, Mass., Oct. 24, 1864 :

.... "You may be glad to hear that my work on *Zulu land*, from which I read a chapter at one of our former meetings, is in press, and likely to be issued in a few weeks."...

Rev. J. G. Auer, of the Cape Palmas Mission, dated Philadelphia, Pa., May 24, 1864 :

.... "I will have sent you a copy of our Grebo Grammar and Grebo Primer, just issued. After my return to Africa, I hope to send you something more and fresh. You will find the books I mention written in Lepsius's Standard Alphabet. The appearance of the little grammar brings a good deal of light into our African schools."...

Prof. Gustav Flügel, dated Dresden, Sept. 26, 1864 :

.... "I see that your literary labors and enterprises for the benefit of Oriental studies make brilliant progress, and embrace a field ever extending. It is a subject of rejoicing with me, for these literary conquests constitute the honor of every nation. ... With us, as it appears, each year has also its important productions, and it is a great gain that our German libraries are enriching themselves with original material of a high value. A great number of Oriental manuscripts have become the property of these libraries, and I trust that yours also have been able to procure their share of similar treasures.

If you inquire of me with what subject I am myself at present chiefly occupied, I would reply that the first volume of a catalogue of the Oriental manuscripts in the Imperial Library at Vienna, by me, will appear in a few months, and I hope that through the means of this publication the literary world will be made acquainted with a considerable number of works hitherto almost or wholly unknown. These manuscripts are already two thousand, and their number increases almost every year."...

Prof. Hermann Brockhaus, dated Leipzig, Aug. 8, 1864 :

.... "The first part of the eighth volume of your Journal is duly received, and I have been, as always, delighted with the excellent works it brings. The Journal has now already become a real mine, which for some branches of Oriental knowledge—as, for example, for the Modern Syriac—is altogether indispensable. ...

The third and fourth parts of the eighteenth volume of our Zeitschrift are through the press. Also the first part of Stenzler's *grhya sūtra* of Ācvalāyana. He gives at present only the text; the translation will appear toward the end of the year.

Justi's Zend dictionary is also just complete. It is an excellent work, and by its means the study of these ancient remains of Iranian culture is for the first time rendered possible. Justi has, by my advice, added further a sketch of the grammar, and a little Chrestomathy, for academical use. This last part will occupy a little more time in the press, but the whole will be out before the end of the year. ...

The object of my proposed method of transcription of the Arabic alphabet is exclusively practical. The success of it or of any other scheme depends on practical use. whoever first publishes in romanized transcription an important work of the Persian literature, for instance, will have determined in its main features the mode of transcription: lesser differences will remain, as they do in our own alphabets. I hold transcription as so important a means of culture that I care little personally for the form of the symbol, provided only they be clear and plain. I contend for the principle, and that must on the whole prove victorious."

M. Léon de Rosny, of Paris, dated Sept. 10, 1864 :

"I have just received the first part of your Journal, for which I beg to transmit my thanks. I should be much pleased to take part in the labors of your learned Society, but do not know in what department of study I could best serve it. I add to this letter a list of memoirs which I have already prepared, and if some one of them shall seem to you of a character to be agreeable to the Society, I shall at once forward it to you."...

Prof. Edward B. Cowell, of Calcutta, dated April 4, 1864 :

"Will you convey to the Society my thanks for the honor they have done me in electing me a corresponding member?"

I have sent in our Society's parcel a copy of Vol. I. of our Sanskrit College edition of the Siddhanta Kaumudī: Vol II. is nearly finished, and will follow; also, of my College edition of the Uttara Rāma Charita. We are now printing new editions of the Cakuntalā, Kāvya-prakāśa, and Ratnāvalī, and I will send copies to the Society. Also, of my translation of the Kusumājali, which is now finished. It is a very imperfect work, although I have spent a great deal of labor on it; and I can only say that in such a labyrinth I should have lost my way much oftener, if I had not taken the pains I have done.

I have found the papers in Vol. IV. of your Society's Journal on the Śaiva system invaluable for my translation of that chapter in the Sarva Darśana Saṅgraha. Nearly every difficulty was solved in one or the other of the three treatises. It is, however, a pity that your learned correspondent [Rev. H. R. Hoisington] did not give the Sanskrit equivalents of the Tamilized words. One hardly guesses *anugraha* under its form *arul*, or *bhoga* under *poka*. Still, I must not find fault with what has been of so great use to me.

I sent you a copy of our manuscript of the Gopatha Brāhmaṇa.

Kern has nearly finished the first *fasciculus* of the Brhat Sanhitā of Varāha Mihira. We are going to publish in the Bibliotheca Indica the original Nyāyathāshya of Vātsyāyana, whom I maintain to be the same as the Pakṣhila Svāmīn of Uddyotakara's *vārttika*. It will be very curious and interesting." . . .

Mahārāja Apūrva Kṛṣṇa Bahādur, of Calcutta, dated Jan. 23, 1864 :

.... "I do myself the pleasure to send you herewith the first volume of my work in manuscript entitled the History of Indūsthāna. This work has been founded on the Vedas and Purāṇas, etc. It will be completed in four volumes. The first volume contains an account of the creation. The second will comprise astronomy and geography, together with the usages, customs, manners, etc., of the inhabitants. The third will treat of the Solar and Lunar races, as well as other followers of the Vedas; and the fourth will dwell on the Mohammedan and English conquerors of the land to the present day." . . .

Dr. A. Bastian, dated Nagasaki, Japan, June 1864 :

"It has always been a great treat to me when I have met with numbers of your Journal on my voyages, and the articles on Buddhism contained in it, have often given me assistance in my studies of that religion, which I pursued during several years' residence in Bima and Siam.

I send you therefore a few notes on that subject, referring to the Brahmanical element in Buddhism, as they might be perhaps of some interest to your Society."

John P. Brown, Esq., of Constantinople, dated June 6, 1864 :

.... "I send you a translation which I made, several years ago, of an Arabic manuscript, which my master, an Aleppine Christian, gave me. It is only a curious history, somewhat after the style of the Old Testament, and, I suppose, is one of the many traditions of the Syriac Christians. . . . I am translating a curious account of Hafiz, with a version of his first ode, which I will send you soon."

Rev. Justin Perkins, D.D., of Orūmiah, dated Aug. 12, 1864 :

"I recall that you once expressed to me the wish that I would give you some details respecting the use of the various languages in our missionary field. In such an intermingling of nationalities, there is, of course, quite a mixture of tongues and most of the people about us speak one, two, or even more, besides their own vernacular dialects.

We come in daily contact with Persians, Nestorians, Jews, Armenians and Kūrds.

The Persians of northern Persia [Persian subjects, of Tatar race?] speak the Turkish as their vernacular: not the cultivated Osmanli of Stambul, but the original Tartar-Turkish, which is still an unwritten language. This Turkish of northern Persia is a common medium of communication among all classes here, and is exten-

sively used eastward, all the way to Thibet. Transactions are never recorded in it: we often—indeed, generally—hear a bargain made in it in the bazaar, while the parties are at the same time writing it in Persian. Our mission contemplates translating the Bible into this dialect at no distant day.

The Persian language is the vernacular of the Persians in the central and southern provinces of the country, and it is spoken by many, of the educated and higher classes, in this northern province of Azerbaijan. The use of both languages is extending in different parts of the country, with the advance of commerce and the prevalence of internal peace.

Arabic is the religious language of the Persians, who deem it unlawful to translate the Koran into another tongue, or to perform their devotions in any other.

The Nestorians speak the Modern Syriac, as you know. It was an unwritten language till we commenced our missionary labors. We have reduced it to writing, and published in it about a hundred thousand volumes, embracing the Holy Scriptures, in several editions, and many other good and useful books. The Nestorians of Persia speak also the Turkish language, as they are brought into constant intercourse with their Mohammedan rulers, masters, and fellow countrymen. Those who live in Kûrdistan, for the same reasons, speak the Kûrdish instead of the Turkish. Where Nestorians dwell in the same villages with Armenians, they also acquire more or less knowledge (and use, for Orientals always use a! the languages they know, if not more) of the Armenian. The Persian is studied, to a limited extent, by many Nestorian youth, of both sexes, in our seminaries.

The Jews of Orûmiah, numbering about five thousand souls, and those in the adjacent regions of Kûrdistan, speak a corrupt Syriac, not greatly differing from that of the Nestorians. They call it Jebâli, i. e., 'of the mountain.' They also speak Turkish and Kûrdish in the same localities where the Nestorians do so. The Jews in the more southern provinces of the kingdom use the Persian as their vernacular. They all read their Scriptures, and perform their religious worship, in Hebrew; and many of their educated men are able to write it and converse in it.

The Armenians, of whom there are thirty thousand in Persia, speak the Modern Armenian, although their dialect differs much from that spoken in Asia Minor. The ancient Armenian is their religious dialect, but they are beginning to use the modern in their religious worship, particularly under the influence and labors of the missionaries. They also speak the Turkish; and those living in villages with the Nestorians acquire their language.

The Kûrds, that strange people, numbering some two millions, and split up into near two hundred tribes, speak a corrupt Persian, which is still an unwritten language, although it could easily be reduced to writing, from its near relationship to Persian. Since the first glimpse we have of them in history, they have fully sustained their ancient character, being always the same barbarous, cruel, treacherous, and marauding people. Rev. Mr. Rhea, of our mission, who spent several years among them and the Nestorians of Kûrdistan, has made out a limited vocabulary of their language, which I hope he may ere long find time to copy for your Society."

There was also read a letter from Dr. Andrew T. Pratt, missionary at Marash, in Syria, dated August 20th, 1864, giving a systematic account of the application of the Armenian alphabet to the writing of the Turkish language. This letter, too long for insertion here, will be printed in the next number of the Journal. In a postscript, Dr. Pratt writes as follows:

"I take advantage of this opportunity to ask for information, if any is to be had, as to the supposed locality of the well known legend of the Seven Sleepers, detailed in the thirty-third chapter of Gibbon's history, and in the eighteenth chapter of the Koran. This question is started by the fact of a claim set up by a town in our neighborhood. About twenty-four hours north of Marash, and six west of Albistan, is the village called Yarpuz, which is commonly taken for Arabissus, the birth place of the Emperor Galerius. With the Turks, however, and in all official documents, it is called Efsus. There are many remains of antiquity, which attest that it was a place of some importance. In the neighboring region, about two

hours distant, is shown the cave where the sleepers spent their two centuries, and every one in the place knows the legend of the persecution of Takianos (the Decianus [Deceius] of the Arabs) and the Christian young men. The locality was so much esteemed in former times that buildings were erected over it; the one over the cave (in which is a spring of water) being, as it now stands, like a dwelling, the other like a *mesjid*. This has a very fine front, in the Saracenic style, except that the door itself has a very flat Roman arch, and over it was a small carved human form, now much defaced. The Koran (see Sale's translation, p. 240, note) represents that buildings were raised over the original cave. At Ephesus in Asia Minor the cave is shown, I understand, but little is made of it, and there are no buildings. Now what is the ground of this tradition here? Was the tradition adopted, and the name assumed to accord with it? or is there an Ephesus (of which I can find no mention) out of Asia Minor? Are there any other claimants for the honor? Perhaps some of your friends can answer these questions, which have a certain interest, though perhaps no great importance."

After the reading of the correspondence, the Society proceeded to listen to communications, of which the following were offered* (the third and fourth at the evening meeting, at Dr. Crosby's):

1. On Brahmanical Inscriptions in Buddhistic Temples in Farther India, by A. Bastian, M.D.

In this brief paper (which will be given in full in the next number of the Society's Journal), the author notes the influence of Brahmanism on Buddhism in Siam and other countries of Farther India, and then proceeds to give versions of the inscriptions accompanying several figures of Brahmins adorning the walls of a Buddhist monastery in Bangkok; concluding with part of the story of a Brahmin who emigrated into Siam from Benares.

2. On Early Mohammedan Coins, with special reference to the specimens contained in the Society's collection, and in that of Yale College, by Mr. Fisk P. Brewer, of New Haven.

The period of early Mohammedan coinage was defined as commencing with the first issue, about A. D. 700, after the removal of the califate from Arabia to Damascus, and as ending about A. D. 1300. The coins of the different regions and dynasties were briefly described, in a geographical order, from east to west, commencing with those of the Ommeiade and Abbaside califs, and passing to those of the Turkoman dynasties in Upper Mesopotamia (remarkable for their employment of human faces and animal figures as ornamental devices), those of Mosul (also in part marked with human figures), of the Fatimite and Ayubite dynasties in Egypt (the former distinguished by the issuance of glass coins by several of its sultans), of the rival califate of Spain, of the Marabouts, etc., etc. The coinage of the Seljuks in Syria and Asia Minor, and of the Mogul conquerors of Mesopotamia, forms the transition to the modern Mohammedan coinage.

As a sequel to this paper, Rev. Nathan Brown, D.D., formerly of Assam, presented to the Society, the next morning, a set of twelve coins (eleven silver and one copper), struck at modern Mohammedan presses in India, and exhibited to the members pre-ent a considerable collection of coins of the same character. The thanks of the Society were voted to Dr. Brown for this valuable gift.

3. On the Domestic Portraiture of the Chinese, by Rev. E. W. Syle, lately missionary at Shanghai.

Rev. Mr. Syle exhibited a handsome specimen of Chinese wood-engraving and printing, in an illustrated history of a Chinese matron of Shanghai, prepared and published by her grandchildren, in commemoration of her rare virtues. It portrays various scenes in her life, which set forth the care, good sense, and energy shown by her in the management and education of her young children after the death of her husband. These were explained by Mr. Syle, who also, in connection with them,

discoursed upon the Chinese ideas of domestic virtue, and upon the filial reverence of the Chinese.

4. On the Origin of Language, by Prof. William D. Whitney, of New Haven.

This was, as the author remarked, the promised continuation or sequel of a former paper, presented to the Society some time since. In that paper, he had endeavored to prove that the beginnings of Indo-European speech (and, partly by inference, partly by direct proof, the beginnings of human language in general) were monosyllabic roots, by the various combination and fusion of which all the forms of inflected language had been produced. He now urged that the problem of the origin of language had thus been stripped of much of its difficulty and mystery. The wealth of the noblest tongues comes by slow accumulation from an original poverty, and we have only to satisfy ourselves further how men should have become possessed of the first humble germs of speech. And, in the first place, it is plainly unnecessary to suppose them generated by any other agency than that which is active in their after combination and development. Language is not otherwise a divine gift than as man's whole nature, with all its endowments and acquirements, is so. Again, it is important to see clearly what is the directly impelling force to the production of language. It is not an internal and necessary impulse to expression on the part of thought itself: it is the desire of communication. A solitary man would never form a language; two could not grow up together without devising some means of exchange of thought. Language is not necessary to thought; all the mental processes could be carried on, though indistinctly and feebly, without it. Thought goes before expression, but tends irresistibly toward it, under the outward impulse to communication; arriving thereby, secondarily, at the possession of an instrument which increases a thousand fold its own capacities. It will have expression, and would have found it in gestures, looks, attitudes, written signs, had the voice been wanting. But the voice is the appointed means of supplying this great want, and no race of men has failed to discover its use. To account for the discovery, and to explain the production of the first elements of articulate speech, several theories have been proposed. The onomatopoeic supposes the first names of objects and acts to have been generated by imitation of the cries of animals and the sounds of dead nature. The interjectional regards our natural exclamations as the beginnings of speech. A third compares man's utterances with the ringing of natural substances when struck, and attributes to the first men an exceptional instinctive faculty for giving expression to the rational conceptions of the mind. This last is supported by nothing in our experience or observation, and is founded on unsound theory: it is to be wholly rejected. To the others, some value is not to be denied: exclamations and imitative sounds must have helped men to realize that they had in their voices an instrument capable of expressing the movements of their spirits. But actual study of language does not show roots to have been, to any noteworthy extent, either onomatopoeic or interjectional; nor does sound theory require it. The process of root making was in the greatest part a free and arbitrary one; it was a tentative process, a devisal and experimental proposal of signs to be thenceforth associated by a community with conceptions which pressed for representation.

The general reason that man's endowments are vastly higher than those of the inferior races is the best that can be given for his exclusive possession of language. Perhaps, however, that mode of mental action, their deficiency in which especially puts language out of the reach of other animals, is the power of distinct reflection on the facts of consciousness; of analyzing impressions, and perceiving that their parts are capable of receiving distinct signs. Some animals approach so nearly to a capacity for language as to be able to understand and be directed by it; so the power of young children to comprehend language is developed earlier and more rapidly than their power of employing it. It may well be questioned whether, as regards capacity for speech, the distance from the unimpressible oyster, for instance, to the intelligent dog is not much greater than that from the dog to the lowest and least cultivable races of men.

A lively and somewhat prolonged discussion followed the reading of this paper.

5. The History of the Learned Haikar, Vizir of Sennacherib the King, and of Nadan, son of Haikar's Sister, translated from the Arabic, by John P. Brown, Esq., of Constantinople.

This communication (respecting which, see Mr. Brown's letter, above) was presented by the Corresponding Secretary, who gave a sketch of its contents, and read sundry extracts, by way of specimens of its style. It has every appearance of being a mere fanciful tale, not founded on anything historical, and arbitrarily attached by its unknown author to the name of Sennacherib.

Haikar, the story tells, being childless, adopts his nephew Nadan, teaches him his wisdom, bestows upon him his wealth, and, in his own old age, procures his appointment as vizir. But the young man turns out badly, and forfeits his uncle's favor, and then, to ruin the latter, forges documents to prove him guilty of treason. By these the king is deceived, and orders his instant execution, but he succeeds in persuading the executioner that the king will repent of his hasty sentence, and lives in close hiding. By and by comes a message from the king of Egypt, challenging Sennacherib to do certain hard things for him, or to pay him the revenue of Assyria for three years, and promising, if he performs them, to give him the revenues of Egypt for the same time. The king and his counsellors are greatly embarrassed, and mourn the loss of Haikar, as being the only man wise and able enough to get them out of their difficulty. Haikar reappears, and is received with great joy, and undertakes at once to satisfy the demands of Pharaoh. He accomplishes the task successfully, and, upon his return in triumph, the king gives Nadan into his hands. He shuts the ingrate up in a dungeon, and upbraids him with his evil behavior until he bursts open in the midst and dies.

6. On Accent, by Prof. Rudolph L. Tafel, of St. Louis.

Prof. Tafel described accent as belonging to the moral element in language, and urged its importance as representing the will of a nation and varying with all changes in national character. He quoted at some length the views of Prof. Moritz Rapp, set forth in his "Physiologie der Sprache," and summed them up in the following points: 1. There are two kinds of accent, the weak and the strong: the weak accent prevailing in some languages, as the Slavonic and the French, the strong in others, as the Spanish, Italian, Modern Greek, and the Teutonic languages. 2. The strong accent is later than the weak in time, and is developed from it. 3. The strong accent often lengthens the vowel on which it falls, or causes the consonant after it to be doubled. 4. The oriental languages incline to accent the final syllables, the occidental languages to accent the anterior syllables of words. 5. In the early stages of language, the accent is determined in its place by the sensuous elements of vowel quantity and position (before two consonants) but in more advanced stages, a radical accent (on the significant root syllable) has been introduced. 6. The former accent is liable to shift its place in the process of inflection and derivation; but the latter is stable. 7. The radical accent has led to the introduction of a secondary accent.

These principles Prof. Tafel illustrated from the Romance languages, showing how, under the influence of a strong accent developed from the weak accent of the Latin, consonants have been doubled, and short vowels made long or expanded into diphthongs, while unaccented short vowels have been weakened (*e* to *i*, *o* to *u*) or lost altogether. These changes, seen in early French, indicate a strong accent in that period, although the modern French has for the most part gone back to the weak accent. Passing to the English, Prof. Tafel pointed out similar changes as the effects of a strong accent developed from the weak accent of the Anglo-Saxon. From this cause unaccented vowels in final syllables have been weakened to *e*, and in most cases lost altogether, leaving to our language little of its old inflection. To the same agency Prof. Tafel referred the changes of sound which the accented vowels of the Anglo-Saxon have generally undergone in English: by which Anglo-Saxon *a*, *e*, *i* (sounded as in *par*, *prey*, *caprice*) have come to be pronounced respectively as *a* in *pray*, *ee* in *peer*, and *i* in *prime*, and Anglo-Saxon *o*, *u* (sounded as in *par*, *prone*, *prune*) to be pronounced respectively as *o* in *prone*, *oo* in *proof*, and *ou* in *proud*. All these changes he viewed as intensifications of the primitive

sounds, produced by the working of a strong accent in the transition-period from Anglo-Saxon to modern English.

The reading of this paper gave occasion to a good deal of comment and criticism, in illustration of, or in dissent from, its principles and statements.

7. Continuation and Conclusion of a Notice of Sulaimán Effendi's Book of First Ripe Fruit, disclosing the Mysteries of the Nusairian Religion; read by the Corresponding Secretary, for the President.

After a brief recapitulation of the points to which special attention was directed in the previous communication to the Society respecting this publication, the fourth section of the tract, relative to the fall of man from a pre-existent state of virtue and happiness in a higher world of light, was read entire, showing an endeavor to explain the existence of evil in this world by making it a punitive dispensation for sins of a previous state of being. It was then stated that the author's fifth section consists entirely of specimens of Nusairian poetry—verses addressed to certain imaginary female personifications of the Supreme Deity of the Nusairis, namely 'Ali, characterized with reference either to the moon or to the heavens, as his visible representative—of which one or two examples were given. The sixth section was also noticed, which contains the author's statement of Nusairian dogmas, interesting chiefly for its confirmation of conclusions to which one is led by the original documents of the tract, though including some particulars not there brought out. The seventh section, it was observed, is a narrative of the author's discovery of the deeper mysteries of the sect, of his conversion first to Judaism and then to Christianity, and of the treatment he met with, in consequence, from the Nusairis. The eighth and last section was passed over, being wholly controversial—an argument against the doctrines and rites of the Nusairis, and of no importance to us as orientalists.

The portion of the tract thus reviewed does not compare in importance and interest with that previously noticed; for which reason, as well as because an abstract of the whole may appear in the Society's Journal, these few lines will suffice, for the present, in addition to what was said of the work on another occasion.

8. On the Interpretation of 1 Cor. vii. 21, by Rev. George R. Entler, of Meredith, N. Y.

The passage reads, "Wert thou called as a slave? care not for it: but even if thou art able to become free, μάλλον χρηῖσαι." Here some (as Calvin, Grotius, and most modern commentators) understand τῇ ἐλευθερίᾳ as the object of χρηῖσαι; while De Wette and Meyer, following Chrysostom and most of the ancient interpreters, consider τῇ δουλείᾳ as the object. Mr. Entler traced the history of opinion on this subject. He examined the testimony of the ancient versions, especially the Syriac Peshito. He regarded ἐλευθερία as the object naturally suggested by the immediate context. The objection drawn from the preceding εἰ καὶ he met by taking καὶ in the sense of *also*. And finally he urged that this interpretation is more in harmony with the views elsewhere expressed by St. Paul and by the other New Testament writers.

Remarks were added by Messrs. Hadley, Proudfit, and Owen, who favored the opposite construction of the passage.

9. The History of Indûsthâna from the Beginning of the World to the Present Time, containing an Account of the Creation, Religion, Government, Usages, Character, Astronomy, etc. of the Inhabitants of that Kingdom; by Mahâ Râja Sir Apûrva Kṛishṇa Bahâdur, etc., etc., etc. Volume First.

The author, whose family have long held high stations at the Court of Delhi, and who was himself Court Poet to the last Mogul emperor, recounts in an Introduction the motives which led him to undertake his present work, and states its plan, in the following words:

"The following nine creations by God came in regular succession :

"The first creation was intellect. The second was that of rudimental principles, thence termed elemental creation. The third was that of organic creation (creation of the senses), which was modified form of egotism. These three were the primary creation, the developments of indiscrete nature, preceded by the indiscrete principle. The fourth creation was that of inanimate bodies. The fifth creation was that of animals. The sixth was that of planets etc. The seventh was that of men. The eighth was that of fixed stars. These five were the secondary creation. And the ninth creation was that of small stars, which was both primary and secondary.

"The author now proceeds to give a detailed account of each of the above nine creations, with their division into castes, together with their respective employments, government, administration of justice, religion, manners, and state of civilization ; changes in caste, changes in government, changes in the law ; present state of philosophy, astronomy, and mathematical science, geography, chronology, medicine, language, literature and poetry, the fine arts and music, other arts, agriculture, commerce, manners, and character ; noticing also the minerals, beasts and birds, insects, etc., of *Indūsthāna*, improperly called *Hindūsthāna*."

The manuscript sent includes only the account of the nine creations, which are described with some detail in the order in which they are mentioned above. The authorities relied on are mainly the *Purāṇas* ; but with their philosophical and scientific dogmas are mixed, here and there, fragments of modern European science, sometimes in a very curious manner.

When the reading of communications was finished, a vote of thanks to the authorities of the University, for the use of their room, was passed, and the Society adjourned, to meet again in Boston on the seventeenth day of May, 1865.

Proceedings at Boston and Cambridge, May 17th, 1865.

The Society assembled, as usual, at 10 o'clock in the morning, at the room of the American Academy of Arts and Sciences, and was called to order by the President.

After the reading of the minutes of the last meeting, the Committee of Arrangements announced the order proposed by them for the present sessions: namely, that the morning should be devoted entirely to business; that the Society should assemble again at 4 o'clock in the afternoon, at the house of President Hill, of Cambridge, to listen to communications, and should adjourn at 8 o'clock, in order to accept an invitation from Dr. Beck, of Cambridge, to a social gathering at his house. These arrangements were, upon motion, accepted and ratified.

Reports from the retiring officers were next called for.

1. Treasurer's Report.

RECEIPTS.

Balance on hand, May 18th, 1864,	-	-	-	-	-	\$450.85
Members' fees: ann. assessments for the current year,	\$455.00					
do. do. for other years,	142.00	597.00				
Sale of the Journal,	-	-	-	-	-	56.34
Interest on deposits in Savings Banks,	-	-	-	-	-	40.66
Total receipts of the year,						694.00
						\$1,144.35

EXPENDITURES.

Paper and printing of Journal (Vol. viii, Part 2), Proceedings, etc.,	-	\$392.23
Binding books,	-	53.53
Expenses of Library and Correspondence,	-	66.20
Total expenditures of the year,	-	\$511.96
Balance on hand, May 17th, 1865,	-	632.39
		\$1,144.35

Not included in the above report is the special fund of about £160 for the purchase of Chinese type, which, being as yet unexpended, remains in the hands of Messrs. Baring, Brothers, & Co., of London, at interest.

2. Librarian's Report.

The Librarian read the list of donors to the Library and Cabinet since the last annual meeting, and briefly explained the character and value of the several donations. The complete statement is appended to the present account of proceedings. The number of printed works in the Library is now 2689; of manuscripts, 122; showing an increase, as compared with last year, of 199 printed works, and 3 manuscripts. The most important part of this unusually large accession had come from the late Hon. C. W. Bradley, the Asiatic Society of Bengal, and Her Majesty's Secretary of State for India.

3. Report of Committee of Publication.

This Committee reported that the printing of the second Part of Vol. viii. of the Journal was only half completed, and that some time must yet elapse before the work would be ready for delivery to the members.

4. Report of the Directors.

The Directors made known that they had appointed the next autumn meeting of the Society to be held in New Haven, designating the President, the Corresponding Secretary, and Mr. A. I. Cothrel of New York, as the Committee of Arrangements for it: the time was fixed for the eleventh of October, unless the Committee should see reason for changing to a later date.

The following gentlemen were proposed and recommended for election as Corporate Members of the Society:

Prof A. M. Hadley, of Crawfordsville, Ind.

Dr. J. H. Slack, of Philadelphia.

Prof. Oliver Stearns, D.D., of Cambridge.

These gentlemen were thereupon balloted for, and declared duly elected.

The following, elected at previous meetings, had signified their acceptance of membership:

Mr. Theodore Dwight, Brooklyn, N. Y.

Mr. Henry C. Kingsley, New Haven.

The following members had deceased since the last annual meeting:

CORPORATE MEMBERS.

Hon. Charles W. Bradley, LL.D., of New Haven.

Prof. Henry H. Hadley, of New York.

Rev. Mark Murphy, of New Brighton, N. Y.

CORRESPONDING MEMBERS.

Bishop William J. Boone, D.D., of Shanghai, China.

Rev. Isidor Loewenthal, of Peshawur, N. W. India.

Rev. Miron Winslow, D.D., LL.D., of Madras, India.

Rev. Austin H. Wright, M.D., of Orumish, Persia.

The Corresponding Secretary, when presenting this list of the losses which the Society had suffered during the past year, gave also some account of the services rendered by the persons named to the Society and to the cause of Oriental learning. Of Mr. Bradley he spoke nearly as follows:

The death of a man like Charles William Bradley, who has so distinguished himself among the patrons and friends of the Society by his active, unremitting, and fruitful labors in its behalf, ought not to be passed over without special notice on our part. He has been our Corresponding Member since 1852, and not a year has passed in the interval, that he has not sent or brought us, from his residence in the East, proofs of his interest in us and in the cause we represent. Last autumn, having returned finally to his native country, he was transferred to the list of our Corporate Members, as member for life: he was detained from meeting with us at that time by an illness which proved to be the forerunner of that which ended his life in the early spring.

Mr. Bradley was born in New Haven, June 27th, 1807. He learned the trade of a printer, but was not content to abide in it, and sought to prepare himself for a higher sphere of usefulness. He entered Trinity (then Washington) College at

Hartford in 1825, stayed through a partial course, and went to the Protestant Episcopal theological seminary in New York, graduating in 1830. About this time he received very severe injuries from a fall in the night, resulting in a distressing sickness of several months, and giving a shock to his nervous system from which he never recovered. Restlessness, excitability, liability to morbid depression, were symptoms which pursued him all his life, limiting his activity, and sometimes rising to a very painful height. These causes compelled him to abandon the ministry after ten years of service in it: change and travel, and the activities of public trusts, became the necessary conditions of existence for him. In 1846, he held for a year the office of Secretary of State of Connecticut. In 1849, after a year or two of foreign travel, he commenced his consular service in the East, at Amoy, where he continued for two years; in 1854, he was consul at Singapore; in 1857, at Ningpo, where he continued until 1860. His consular life, however, was varied by other special public employments. In 1857, he returned home as bearer of the new treaty with Siam, and, on his outward passage to Ningpo, he took with him its ratification, being invested for the purpose with plenipotentiary powers. The next winter, he accompanied the expedition to the Pei ho, at the instance of Lord Elgin, as one whose knowledge of the people and the country made his aid of special value. Returning in the spring to his station, he found awaiting him there the appointment of senior commissioner on American claims against the Chinese government, the settlement of which was successfully and honorably accomplished, after months of perplexing toil at Macao.

With health much enfeebled by severe labor in a trying climate, and discouraged by the insufficient recognition of his services on the part of the Government, Mr. Bradley resigned his consulship in 1860, and returned to this country. But the next year he returned once more to the East, travelling extensively on the way in central and northern Europe. During this absence, he held the office of Assistant in the Chinese imperial customs at the great central mart of Hankow. But hard work, deprivation of society, and the discomforts of the place, continued to tell upon his health, and he turned his face homeward for the last time in the fall of 1863, and reached London in March, greatly reduced by the voyage. He spent a few weeks in Germany, and arrived in New Haven in August, 1864. It was then apparent to any one who knew him that his constitution was broken down. A slight paralytic shock had lamed both his limbs and his organs of speech. He did not rally, but steadily grew worse, and ceased to live on the 8th of March, 1865.

Distinguishing features of Mr. Bradley's character, which were prominently illustrated in all his private and public dealings, were unselfishness, courtesy, and probity. These combined to win him the respect and confidence of all with whom he came in contact—of both natives and foreigners, in the often trying and delicate situations in which his duties placed him. It was known that, while tenacious of the honor of his country and the just interests of his countrymen, he would tolerate and uphold no unfairness and no unkindness toward the Oriental populations. He had almost a jealous care for the concerns of the weaker race, whom he regarded as especially under his protection. He abruptly abandoned a business connection into which he had entered upon his first arrival in China, on finding that the firm were engaged, in part, in trading in opium.

His love and interest for learned pursuits were unusual, although his health, during most of his life, disqualified him for severe and continued mental labor. He had given much attention to the subject of proper names, assembling a rich series of books relating to it, and making many manuscript collections and investigations, some of which may perhaps be found in a condition to be published. The only paper he is known to have printed was in this line of study. But if his scholarly activity was thus limited, the sincerity of his interest was shown by his generous liberality toward those engaged in such pursuits. He was a benefactor to many individuals and societies. An indefatigable collector of books, of archaeological curiosities, of objects of natural science, he always collected for others rather than for himself: his constant inquiry seemed to be "to whom can this be made useful?" In a letter from Shanghai, dated October, 1863, and marked "private and confidential," but which it is not improper now to make public, he says: "There is no limit to my desire to serve the cause represented by your Society—I would send you a ship-load of books and manuscripts, if I were able—and I extremely regret that it is not in my power to be more liberal in my offering than I now am; but, such as it is, I

offer it gladly. There are other societies and individuals on my list which must not be forgotten: such as the British Museum, British Archaeological Institute, Liverpool Literary and Scientific Society, Société des Antiquaires de Normandie, Det Kongelige Nordiske Oldskrift-Selskab, etc., etc., to which I have given, in the past twelve years, in money and in books, MSS., and other articles which I have purchased for them, over \$7,300. During the past twenty years, I have also assisted young persons in obtaining their education, in different sums, amounting in all to more than \$6,000. I can truly say that, in thus expending more than two thirds of my income, I have derived far greater satisfaction than I could have done by using it in any other way. I do not say these things in a spirit of boasting, but to give you my only reason for not doing more for the interests of your institution, which I have much at heart."

Notwithstanding that he thus seeks to excuse the smallness of his gifts, Mr. Bradley's donations to the Society's collections have been vastly greater than those of any other person. Of the 2800 titles of works, printed and manuscript, composing our library, more than 850 belong to books which he has given, an unusually large proportion of them being costly and valuable works, published in Europe or the East. Indeed, it is little to say that, if the volumes received by exchange from other societies be deducted, more than half the value of the rest of our library came from him. After his last return to this country, and when he was in treaty for the sale of his large collection, feeling unable longer to retain it, he went carefully through each shelf, picking out and setting aside for us every book which had any relation to the Orient. Our cabinet has been in almost equal proportion enriched by his liberality. And he has brought to our treasury, within five years past, more than a thousand dollars, collected by personal solicitation from American merchants resident in China, a part of it for the specific object of the purchase of a font of Chinese type, the first in America, which will long remain, we trust, a monument of his desire that his countrymen should better understand, and do justice to, the people among whom his own lot had so long been cast.

Upon his later gifts of books, Mr. Bradley saw fit to impose the condition that the library should not be removed from its present place of deposit, in the building of the library of Yale College, if such removal be made, they were to pass (with the exception of duplicates) into the possession of the latter library. While we must, as a Society, regret this restriction, we may yet assume that it will not probably be for a long time, if ever, that occasion for removal will occur; while, even if the condition should become operative, it would yet leave in our possession a much larger donation of books than we owe to any other individual.

Dr. Peter Parker, of Washington, added his testimonial to the worth of Mr. Bradley, as a man and a public officer. He paid, further, a feeling tribute to the gifts and virtues of Bishop Boone, and to his laborious and successful efforts in behalf of enlightenment and Christianity in China.

Dr. Rufus Anderson, Secretary of the American Board of Commissioners for Foreign Missions, being called upon, gave a brief report and estimate of the life and labors of Dr. Winslow and Dr. Wright, missionaries of the Board, who had died at their posts, after long and faithful service. He read, in part, from the biographies of these gentlemen published in the "Missionary Herald" for March and May, 1865. Dr. Winslow's most important literary work, the Comprehensive Tamil and English Dictionary (Madras, 1862, 4to), which he hardly more than lived to finish, was laid upon the table, for the examination of the members present.

The Corresponding Secretary read, from the "Foreign Missionary" for April, 1865, some account of Mr. Loewenthal, whose life of rare promise, in a literary as well as a philanthropical point of view, was brought to a premature close (he was but thirty-eight years old) during the past year.

He also referred to the severe loss which Semitic studies in America had sustained in the death of Prof. Hadley, who filled the chair of Hebrew in the Union Theological Seminary at New York. No one in the country had laid a broader foundation of profound scholarship, or gave promise of greater eminence and usefulness.

The business next in order being the choice of officers for the ensuing year, Mr. Charles Folsom, Prof. E. P. Barrows, and Dr. Peter Parker were appointed a nominating committee, and the following ticket, proposed by them, was elected without dissent :

<i>President</i>	—Prof. EDWARD E. SALISBURY,	of New Haven.
<i>Vice-Presidents</i>	{ Prof. CHARLES BECK, Ph. D.,	" Cambridge.
	{ Rev. WILLIAM JENKS, D. D.,	" Boston.
	{ Pres T. D. WOOLSEY, D. D., LL. D.,	" New Haven.
<i>Corresp. Secretary</i>	—Prof. W. D. WHITNEY, Ph. D.,	" New Haven.
<i>Secr. of Classical Section</i>	—Prof. JAMES HADLEY,	" New Haven.
<i>Recording Secretary</i>	—Mr. EZRA ABBOT,	" Cambridge.
<i>Treasurer</i>	—Prof. D. C. GILMAN,	" New Haven.
<i>Librarian</i>	—Prof. W. D. WHITNEY,	" New Haven.
<i>Directors</i>	{ Rev. RUFUS ANDERSON, D. D.,	" Boston.
	{ Mr. A. I. COTHEAL,	" New York.
	{ Prof. W. H. GREEN, D. D.,	" Princeton.
	{ Prof. J. J. OWEN, D. D.,	" New York.
	{ Prof. A. P. PEABODY, D. D.,	" Cambridge.
	{ Dr. CHARLES PICKERING,	" Boston.
	{ Prof. JOHN PROUDFIT, D. D.,	" New Brunswick.

The correspondence of the last six months was laid upon the table by the Corresponding Secretary, and, as usual, read in part. Among the extracts made were the following :

M. Ad. Regnier, under date of Jan. 15th, at Paris, writes :

"In conformity with the desire which you expressed to me, I have solicited one of my colleagues at the Institute, M. Alfred Maury, to obtain from the Minister of Public Instruction the gift to the American Oriental Society of M. Renan's account of his journey to Phenicia. M. Maury has very obligingly acceded to my request, and, thanks to his efforts, the minister has just granted you, with a very good grace, a copy of the work in question." . . .

Prof. O. Böhtlingk, St. Petersburg, Mar. 28th, 1865 :

"To-day the fourth division of our Sanskrit Lexicon, including to the end of the letter *ph*, has been completed: the last part contains sixteen sheets. Of the third volume of my Indische Sprüche, 224 pages are printed, to the word *brāhmaneshu*. In this part I have attempted to restore many corrupt aphorisms from the Pancatantra, to which Benfey had taken no exception, while nevertheless they yield no acceptable meaning in their present form." . . .

Prof. E. B. Cowell, Ipswich, April 25th, 1865 :

"My Pundit writes to me from Calcutta that a very great Pundit has come thither from Cashmir. He came some years before, and astonished our Pundits by his profound acquaintance with the Khandana Khandā Khādyā of Śrī Harsha: in fact, he seems almost the only man in India who really knows it. My Pundit, Mahesh Chandra, then, after some weeks of fruitless entreaty, at last persuaded the old man to let him sit at his feet and hear him lecture on it. Mahesh Chandra now writes that he has just read with him, during his second visit, Mādhyama's Bauddha Darśana, which was an insuperable *cruz* to our Pundits, and has got all the difficulties cleared

up against my return. . . . My leave is extended until December, so that I shall not be obliged to start for India before November." . . .

Prof. G. I. Ascoli, Milan, Jan. 24th, 1865 :

"I beg you to express to the honorable American Oriental Society my lively gratitude for the nomination to Corresponding Membership with which it has seen fit to honor me. And I pray you farther to present to the Society a copy of my little work entitled 'Frammenti Linguistici.'

"Within no long time, I shall send to the Society another little work of mine, 'Zigeunerisches,' originally intended to be a mere criticism of the article of Paspatis on the Gypsy Language of Turkey, published in the seventh volume of your Journal." . . .

The work referred to, on the Gypsy Language, having just arrived, was laid before the meeting, with a brief explanation of its character.

Rev. Albert Bushnell, Baraka, W. Africa, Feb. 17th, 1865 :

"You will, I doubt not, be interested to learn something respecting the progress that is being made in reducing the languages of West Equatorial Africa to writing, and in creating a literature in them. Only about a score of years have passed, since all the languages and dialects spoken by the numerous tribes between the Niger and Congo were unwritten, and unknown to foreigners. The natives on the coast and near the rivers who had come in contact with white men, and noticed that they communicated intelligence by means of silent written characters, regarded it as a kind of civilized witchcraft or black art, far beyond the comprehension of a black man, or his ability to learn. But now, ten of these languages, all of principal importance, have been acquired, and eight of them reduced to grammatical rules; and already a considerable amount of literature has been published in them. Thousands of natives have learned to read, and each, in his own tongue, hears the gospel preached and the songs of Zion sung.

The Mpongwe was the first of these tongues to be reduced to writing. It was found to be in many respects a remarkable language, philosophical in its structure, euphonious, and exceedingly flexible. After many years of daily use, it still develops new beauties, and new difficulties. It is spoken by the small remnant of the Mpongwe tribe at Gaboon, and their kindred at Cape Lopez, Camma, and a short distance inward to the south east; but not so extensively as was at first supposed. There have been published in this language a grammar and vocabulary, a primary reading book, catechisms, hymns, and about one half of the New Testament, with a smaller portion of the Old. The work of translating the Scriptures is gradually progressing, and at not a very distant day will be completed. The French Jesuit missionaries have also published a few books in this language, but mostly, I believe, connected with their own church service. . . .

The Bakéle language, differing materially from the Mpongwe, though having many words in common with it, is spoken by the Akéli people, who reside a little distance from the coast, on either side of the equator. They are much broken and scattered, being hard pressed by the more numerous and warlike Pangwes, who are migrating from the highlands toward the coast. This language was reduced to a written form several years since, and a grammar, a vocabulary, some primary books and hymns, and the Gospel of Matthew, were published in it. A few of the people have learned to read it, but it has not as yet been extensively used. . . .

The Pangwe language, spoken by the large cannibal tribe now occupying the regions of the upper Gaboon and its tributaries, has been partially reduced to writing, but nothing has been published in it. The people are mingling with the Akéli and Mpongwe tribes, and are rapidly acquiring their language, as are also some of the adjacent tribes, so that possibly these two written tongues may yet serve for all the population residing near the equator on this side the Sierra del Crystal mountains.

The Benga language, which is spoken on the island of Corisco, about forty miles north of Gaboon, and by a few people on the main land in the vicinity of Capes Esterias and St. John's, has been written out, a grammar has been prepared, and hymns, catechisms, and portions of Scripture translation have been published in it. A large number of the natives have learned to read, and it is probable that, through

the medium of this tongue, Christian civilization may be communicated to the scattered tribes residing in and near the rivers Moondah, Muni, and Bonita. The Benga has many words in common with the Mpongwe and Bakèle, but is more nearly related to the latter. . . .

All the languages thus far mentioned are somewhat related, and the tribes which speak them intermingle and intermarry; but the next to which I shall refer—viz., the Dualla—is spoken at the Cameroons River and places adjacent, about two hundred miles north of Gaboon, and by tribes entirely unconnected with those on and near the equator, and it belongs to a different class. It is written, and the entire New Testament has been translated into it, besides portions of the Old Testament, catechisms, hymns, school-books, etc. The whole Bible will at no distant day be published in this important tongue, which many of the natives have learned to read and write. . . .

About seventy-five miles north of the Cameroons, on the Old Calabar river, some fifty miles from its mouth, live a tribe speaking the Efik, a language which has been reduced to writing, and now contains more literature than either of the before-mentioned languages. School-books, including a grammar, arithmetic, geography, catechisms, hymns, etc., have been published. The whole of the New Testament, and the larger part of the Old, have been translated already, and the Efik people will soon have the whole Bible in their native tongue. As this is the most influential tribe on the waters of the Old Calabar, the other less important dialects may give way, or become assimilated to it; and the rude tribes on either side, and far inland, may be benefited by the literature which has been prepared, and is every year increasing, in the Efik. . . .

North of the Old Calabar, in all the Delta of the Niger, including the Bonney, New Calabar, Benin, and other rivers, is spoken the Isuama-Ibo. A few small books in it have been published. . . .

North of the Niger Delta, the Yoruba language is extensively spoken, and is now read by a large number, who at Sierra Leone or in their own country have been brought under missionary influence. . . .

The aborigines of Fernando Po, an island in the Gulf of Guinea, about a hundred miles from the coast, speak a language quite different from those thus far treated of. It was reduced to a written form several years ago, and a grammar and a few small books were published, but it has never been much used. . . .

The first three of the languages I have mentioned (or four, including the Pangwe) were written out by American missionaries, the others by English and Scotch. Although much that has been published may be found imperfect when the languages are more thoroughly and familiarly known, still the literature is doing good service, and the additions made to it will be an improvement upon what now exists.

As our work proceeds, it may be found expedient to acquire and reduce to writing some of the other dialects spoken by coast tribes; and, as it advances inward, much of this kind of labor will probably have to be performed, for as yet we have no knowledge of any very large tribe or nation speaking the same language. The multiplicity of tongues in Africa will render the progress of Christian civilization slow, until natives are sufficiently educated to engage in this department of labor as well as in others: for many of them manifest a remarkable capacity for the acquisition of languages. There are some known to us who speak with tolerable fluency five or six different tongues." . . .

Mr. Bushnell adds specimens—generally the Lord's Prayer—of several of the languages referred to: these are here omitted.

Dr. Julius Fürst, Leipzig, Feb. 27th, 1865:

"It has long been my wish to give to the American Oriental Society, of which I am so fortunate as to be an Honorary Member, a new token of my hearty sympathy with its efforts. I permit myself, accordingly, to send this day to the respected Society a report of my scientific labors down to the present time, in which I lay before it the titles of the works composed by me, arranged according to departments, and with explanatory remarks appended. You will see from this report that, for more than thirty years, I have, zealously and according to my strength, labored to produce such works in the various departments of Oriental languages and litera-

ture as should bring honor to science. Only the retrospect over my life, rich in learned activity, gives me courage really to rejoice in the honor which has been paid me by the American Oriental Society.

I permit myself farther to express to the Society the assurance of my unchangeable respect, on account of its admirable labors, which I ever follow with great interest." . . .

The report here referred to is in the form of a circular letter, lithographed in manuscript. It details, with explanation of their design and bearing, and of the reception which they have met, the author's numerous works, under the successive heads of Philology, Translations and Editions, Scientific Journal, Jewish History, and Bibliography. It was read in abstract, and remarks were made upon it, and in recognition of Dr. Furst's labors and merits, by Prof. Barrows and others of the members present.

At the afternoon meeting, at the house of President Hill, in Cambridge, the Society listened to communications.

1. Modern Philology: its Method, Objects, and Results; by Prof. Rudolph L. Tafel, of St. Louis: read by Mr. Abbot.

The fundamental distinction between ancient and modern philology, according to Prof. Tafel, is that the former pursues the synthetic method, the other the analytic. The one starts from theories, the other from facts, ascending ever from the known to the unknown. One of the preconceived ideas of the synthetic school is that language is thought itself, manifested to the senses—the body, of which thought is the soul; hence, that language, like thought, is organic. This false view is carried to its extreme by Becker. It leads to the setting up of a system of Universal Grammar, and the identification of this with Logic. The mind of Wilhelm von Humboldt was the battle ground in which the final struggle between ancient and modern philology was fought, and the analytic method gained the ascendancy. Humboldt's chief interpreter is Dr. Steintal, of Berlin, who has rid his philology of the relics of the old school that still clung to it, and who has annihilated the phantom of a universal grammar. The most important point established by the new school is that language and thought are separate, and differ in their organization. Language consists of materials by which thoughts and their laws may be expressed. Even a contracted and imperfect tongue, like the Chinese, suffices for the purpose. Not, however, that each language expresses with equal facility all thoughts. This depends on the content of a language, as representing the progress of a people in knowledge, and also upon its style and habit, as representing peculiarities of national character. Such peculiarities are expressed partly in the grammar, partly in the varieties of word-derivation. With the one deals the science of comparative grammar; with the other, that of comparative etymology. In the latter, Prof. Pott of Halle has especially distinguished himself; he interestingly illustrates national idiosyncrasy as shown in speech. Such idiosyncracies extend to the mode, the physiognomy, of thought, and manifest themselves in grammar or in syntax. The Indo-European languages differ from one another greatly in their word-derivation, showing differences of perception, each thus presenting a somewhat peculiar aspect of the world; but they agree in their process of development of intellectual and moral expression out of physical: while the Semitic tongues have in this respect a character of their own, preserving more persistently the sensuous significance of their words. The object of modern philology is to define and illustrate the different modes of thought and perception belonging to different races, communities, and individuals. The task is only proposed, not yet accomplished. The science is still occupied with labors upon the externals of language, preparing for its inner analysis. And comparative grammar is farther advanced than comparative etymology.

Ample extracts from the writings of Steintal and of Pott were given in illustration of some of the topics presented in this paper.

2. On the Classification and Characteristics of the Hottentot and Zingian Tongues; by Rev. Lewis Grout, of Feeding Hills, Mass. .

This paper was a summary exhibition of the relationship of the South African languages, with some account of their structure. The author first reviewed Lepsius's scheme of African languages, then that of Dr. Bleek, given in the latter's Catalogue of Sir George Grey's Library. Of the Hottentot species of the South African division of the suffix pronominal languages (the gender-denoting), he briefly described the Namaqua, the most perfect of the dialects. Of the prefix-pronominal languages, the Zingian family—the Bantu of Dr. Bleek—fills nearly the whole southern part of the continent. Its divisions were defined, and their correspondences and characteristic differences glanced at; and finally, the main features of their common structure were reviewed: their simple phonetic form, each syllable of their polysyllabic words ending in a vowel; the varied incipient elements or prefixes of their nouns, with which are made to agree those of the adjectives and participles; the conjugational forms of the verbs; the freedom of syntactical arrangement, and the leading principles which govern such arrangement; and so forth.

3. On the Origin of the Hindu System of Nakshatras, or the Lunar Division of the Zodiac; by Rev. Ebenezer Burgess, of South Franklin, Mass.

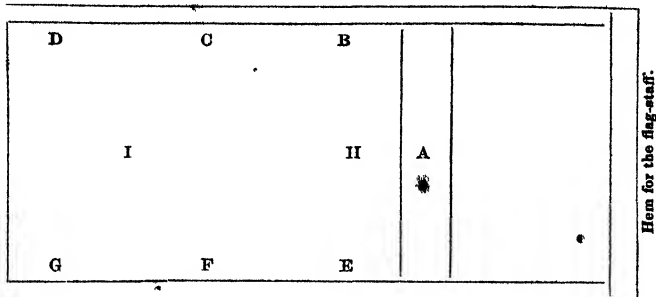
Mr. Burgess expressed his confident belief that the system of *nakshatras* originated in India itself, and gave his reasons for this belief at considerable length, reviewing and opposing the opinions of others who had taken part in the discussion of the question. He denied the genetic relationship of the Chinese *sieu* with the *nakshatras*, and held the Arabian *manāzil* to be directly derived from India. His arguments were based upon the following considerations: "the indisputable documentary evidence of the existence of astronomical discovery, knowledge, and culture in India, which involve the recognition and use of the *nakshatra* system, as early as from the 14th to the 12th century before Christ; the absence of reliable evidence of the existence of the system either in China, or Arabia, or any other country, at that early date or for some centuries after; some resemblances and discrepancies as now found in the three countries respectively; the state of astronomical and other knowledge in the three countries named; and the evident course of communication of knowledge and influence between different nations at that early time." Mr. Burgess altogether refused to credit that the planets had not been noticed and named by the Hindus during the period of their ancient astronomy: he also considered it exceedingly probable that they were in possession at that time of instruments for the accurate observation of the heavens. He concluded with expressing his disbelief that the discovery of any new evidence bearing upon the point in controversy was to be looked for, and regarded the conclusion of the Indian origin as a final and impregnable one.

Mr. Burgess's paper, being of great length and fulness, was read in part only, by abstract and extract. Prof. Whitney replied briefly to some of its positions and statements.

During a short recess which followed, there was exhibited to the meeting a flag of one of the regiments of Janissaries, massacred by Sultan Mahmūd in 1826. It is the property of Prof. J. Lawrence Smith, of Louisville, Ky., who purchased it in Constantinople about 1850. It is of the richest and heaviest crimson silk—of Damascus fabric, as is supposed—and measures about seven by ten feet, weighing three and a half pounds. A green border, six inches in width, runs about it, and it is crossed by a broader band of the same color at a third its length from the staff. The border is filled with arabesque ornaments, which are also scattered over the field of the flag. Among these are a number of medallions, which, as well as the cross-band, are occupied by

inscriptions. The inscriptions and decorative figures are woven in (not embroidered) in gold thread.

The following diagram will give an idea of the disposition of the inscriptions:



Upon the band, A, is repeated seven times, in square medallions, the common Muslim symbol, لا اله الا الله محمد رسول الله, 'There is no God but Allāh—Muhammad is the Messenger of God;' after which comes once more لا اله الا الله. In six round medallions, B to G, are the following legends: B. الله جل جلاله, 'Allāh—glory, glory to him!'—C. نبي محمد السلام عليه, 'Prophet Muhammad—peace be to him!'—D. ابو بكر رضي الله عنه, 'Abū Bakr—God be gracious to him!'—E. عثمان رضي الله عنه, 'Umar—God be gracious to him!'—F. علي رضي الله عنه, 'Alī—God be gracious to him!'—G. In a much larger medallion at H, of circular form, enclosing a crescent, is read the following characteristic motto: روى عن النبي صلى الله عليه وسلم سكت, 'It is reported on the authority of Abū Hurairah—God be gracious to him! that the Messenger of God—may the Almighty's peace and benediction rest upon him! said: "The cutting off of the life of an enemy is better than worship for seventy years." Year 1233' [A. D. 1817]. To this the response is made, in another circular medallion at I, فنسعى الا وفاق بامر الله, 'So let us to our work only as obedient to God's command.'

The flag, which appears to have been not quite ten years old at the time of the dissolution and destruction of the corps to which it belonged, is in an excellent state of preservation, almost as if new.

4. On the Definition and Relations of Vowel and Consonant; by Prof. William D. Whitney, of New Haven.

In this paper, Prof. Whitney defended, and endeavored by a fuller exposition and discussion to establish, the view expressed in his criticism, of Prof. Lepsius's Standard Alphabet published in Vol. vii. (pp. 299–332) of the Society's Journal: namely, that there is a constant progression in respect to degree of closure of the organs from the openest vowel *a* (as in *father*) to the closest consonants *k*, *t*, and *p*, and that these are the natural limits between which the whole alphabet may be, and should be, arranged, as a single homogeneous system; that vowel and consonant are

thus, not two separate and diverse classes, but the two poles of a series, the vowel being the opener sounds, the consonants the closer; while upon the boundary between the two are classes of articulations which are capable of employment, now as vowels, now as consonants, without any change of phonetic character, but according to their surroundings, and the stress and quantity with which they are uttered. Occasion was taken to discuss and define anew the theory of the syllable.

The article was prepared as a note to the letter of explanations by Prof. Lepsius, read at the meeting of the Society in May, 1864; and it is to be printed as such, in the next number of the Journal.

Rev. Charles H. Brigham, of Taunton, had prepared to be read at this meeting an account of the views of Dozy expressed in his recent work "The Israelites at Mecca, from the time of David till the fifth century of our era;" but, the appointed time of adjournment having arrived, he gave only the introduction and a very brief summary of the paper, reserving its full presentation for another occasion.

The Society then adjourned, to meet again in New Haven, in October next.

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Daily Food, in Zulu. New York 24mo.
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Del Nesso Ârio-Semitico. Lettera Prima.... Lettera Secunda.—Lingue e Nazioni. —Frammenti Linguistici. Four essays by Prof. Ascoli. Milan: 1864. 8vo.
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The Taittiriya Brâhmana, etc. Fasc. x-xix.
The Aphorisms of the Vedânta, by Bâdarâyana, etc. Fasc. v, viii-xiii.
The Chhândogya-Upanishad, translated. Fasc. ii.
Kâmandaki's Elements of Polity. Fasc. ii.
The Mârcandeya Purâna. Fasc. vi.
The Conquest of Syria, ascribed to al-Wâqidi. Fasc. ix.
Dictionary of Musalman Technical Terms. Fasc. xx.
Hindû Astronomy I. The Sûrya-Siddhânta, translated by Pandit Bâpû Deva 'Sâstrî.... 1 Fasc.
Hindu Astronomy II. The Siddhânta 'Siromani, translated by Lancelot Wilkinson. Fasc. i.
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The Târikh-i Baihaki. Fasc. i-iv, ix.
The Vais'esika Dar's'ana, with the Commentaries of 'Sankara Mis'ra and Jayanârâyana Tarka Panchânana. Edited by the latter. 5 Fasc.

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- The Kaushītaki Brāhmaṇa-Upanishad with the Commentary of 'Sankarānanda, edited with an English Translation by E. B. Cowell. 2 Fasc.
- The Kāvyaḍars'a of 'Sri Dandin, edited, with a Commentary, by Paṇḍita Premachandra Tarkabāgīś'a. 5 Fasc.
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- The Mīmāṃsā Dars'ana, with the Commentary of 'Sabara Swāmin, edited by Pandita Maheś'a Chandra Nyāyaratna. Fasc. i.
- The Sankara Vijaya of Anantananda Giri, edited by Pandita Nabadwipa Chandra Goswami. Fasc. i.
- The Brhatsaṃhitā of Varāha-Mihira, edited by Dr. H. Kern. Fasc. i, ii.
- The 'Srauta-Sūtra of As'walāyana, with the Commentary of Gārgya Nārāyaṇa, edited by Rāma Nārāyaṇa Vidyaratna. Fasc. i.
- The 'Tārīkh-i Feroz-Shāhī of Ziaa al-Dīn Barnī Edited by Saiyid Ahmad Khān. 7 Fasc.
- The Tabaqāt i Nāsiri of Abū 'Omar Minhāj al-Dīn 'Othmān. Edited by Capt. W. Nassau Lees. 5 Fasc.
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- Philologische und Historische Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin. Aus dem Jahre 1863. Berlin: 1864. 4to.
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- A Dictionary of the Mixed Dialects and Foreign Words used in Telugu. . . . By Charles Philip Brown, etc. Madras: 1854. roy. 8vo.
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- A Dictionary, Persian, Arabic, and English. By Francis Johnson. London: 1852. 4to.
- The Shah Namu. . . . By the celebrated Abool Kausim i Firdousee, of Toos. In Eight Volumes. Volume First. [Edited by M. Lumsden] Calcutta: 1811. fol.
- Anvár i Suhel, or Lights of Canopus, being the Persian Version of the Fables of Jidpál, by Husam Vâiz Kâshifí. Edited by Lieut.-Col. J. W. J. Ouseley, etc. Hertford: 1851. 4to.
- Contributions to the Numismatic History of the Early Mohammedan Arabs in Persia. By Edward Thomas, etc. London: 1849. 8vo.
- Arabic Selections, with a Vocabulary. By Edward Vernon Schallch, etc. [Haileybury:] 1830. 4to.
- Arabic Syntax chiefly selected from the Hidayut-oon Nuhvi, a Treatise on Syntax in the Original Arabic. By H. B. Beresford, etc. London: 1843. roy. 8vo.

From Prof. Friedrich Spiegel, of Erlangen.

- Commentar über das Avesta von Friedrich Spiegel. Erster Band. Der Vendidad. Leipzig: 1865. 8vo.

From the Smithsonian Institution.

- Smithsonian Miscellaneous Collections Vol. v. Washington: 1864. 8vo.
- Smithsonian Contributions to Knowledge. Vol. xiii. Washington: 1863. 4to.

From Rev. E. W. Syle, of Pelham, N. Y.

- Specimens of Japanese copper-plate engraving: twenty small sheets, about four by five inches, representing scenes of Japanese life.

From Prof. C. J. Tornberg, of Lund, Sweden.

- Ibn-el-Athiri Chronicon. . . . Edidit Carolus Johannes Tornberg, etc. Volumen Decimum. Lugduni: 1864. 8vo.

From the Imperial Royal Geographical Society of Vienna.

- Mittheilungen der Kaiserlich-Königlichen Geographischen Gesellschaft. vi. Vienna: 1862. 107. 8vo.

From Prof. Albrecht Weber, of Berlin.

- Die Râma-Tâpaniya-Upanishad. Von A. Weber. [Aus d. Abh. d. Kön. Ak. d. Wiss. zu Berlin, 1864.] 4to.
- Ueber die hundert Sprüche des Cârakya. [Aus d. Monatsb. d. Kön. Ak. d. Wiss. zu Berlin, 1864.] 8vo.

From C. E. West, LL.D., of Brooklyn.

- Papers relating to the Long-Island Historical Society.

Proceedings at New Haven, Oct. 11th and 12th, 1865.

THE Semi-annual Meeting of the Society for 1865 was held at New Haven, in the Hall of the Brothers in Unity, Yale College, commencing on Wednesday, October 11th, at 3 o'clock P.M. The chair was taken by the President.

The Recording Secretary being absent, Prof. Lewis R. Packard, of New Haven, was elected Secretary *pro tempore*.

On the proposal of the Committee of Arrangements, the Society voted to adjourn the literary meeting for the day at 6 o'clock; to accept, with thanks, the President's invitation to a social gathering at his house in the evening; and to assemble again at 9 o'clock on Thursday morning.

The Directors gave notice that the next annual meeting, in Boston, would be held on the 16th of May, 1866; and that Dr. Beck, with the Recording and Corresponding Secretaries, were appointed a Committee of Arrangements for it. They also presented to the meeting the names of the following gentlemen, with recommendation that they be elected as Corporate Members:

Hon. John D. Baldwin, of Worcester, Mass.,
Rev. William H. Benade, of Pittsburgh, Pa.,
Mr. J. Carson Brevoort, of Brooklyn, N. Y.,
Mr. C. Astor Bristed, of New York,
Prof. Henry N. Day, of New Haven,
Prof. Samuel S. Greene, of Providence, R. I.,
Mr. Richard C. Morse, of New Haven;

and, for election to Corresponding Membership,

Prof. Ph. Ed. Foucaux, of Paris.

The recommendation was accepted, and the gentlemen proposed were elected without dissent.

Extracts from the letters received during the past six months were read by the Corresponding Secretary. Among the, unusually numerous, letters of excuse and explanation from members detained away, was one from Dr. S. R. House, missionary at Bangkok, enclosing six photographs of bronze statues, representing planetary divinities, in the palace of the king of Siam. Dr. House writes respecting them:

"Brahmans have from time immemorial been held in high estimation in Siam as court astrologers and almanac makers; and, Buddhists as the Siamese are, they do not scruple to borrow much of their demonology and many superstitious rites from the rival system."

A letter from his Majesty, Pawarendr-Ramesr, Second King of Siam, acknowledging and returning thanks for his election as an Honorary Member, was presented. His Majesty concludes:

"It is gratifying to learn, through your Society's published works, of the interest taken in the United States in Oriental learning. Allow me to hope that this in-

terest, as well as the benefit derived from such studies, may continue to increase and result in much good.

"The civil war in the United States has probably somewhat diverted your attention from Oriental literature, but peace seems to be drawing near, and I may hope that a glorious future in learning, art, science, and useful knowledge awaits you and your country?"

Rev. A. Bushnell, missionary at Gaboon, W. Equatorial Africa, under date of July 26, 1865, writes:

"There is little of special interest to communicate to your Society from these equatorial regions of the dark continent, but I believe it is admitted that the slave trade has nearly ceased its ravages. The small pox, which has sorely scourged the coast tribes during the last eighteen months, is declining; but, I fear, is extending its desolation into the more populous interior. Mr Du Chaillu, the indefatigable explorer, is in the interior, a little south of the Equator, struggling to pursue his adventurous course; but, for several months past, we have heard nothing from him."

"Here, on the Gaboon, French power is increasing, and French influence extending; and the Spanish authority is becoming firmly established on the island of Fernando Po, and spreading to some other points on the coast. The Papal power, now waning in Europe, seems, through the instrumentality of the Jesuits, to be renewing its efforts at conquest in Western Africa, where at an early day it held even whole tribes south of the Equator under its dominion."

"A Scotch Missionary from Old Calabar river is now making us a visit, from him I have gained some interesting facts respecting the progress of Christian civilization among the tribes in that region. The missionaries have explored both the Old Calabar and its northern branch, the Cross river, something more than a hundred miles from the sea, and have gained considerable influence over the inhabitants who people their banks and the adjoining country. Formerly, human sacrifices prevailed to a fearful extent in all that region, but now, in the vicinity of the mission, they have all been abolished excepting one—the sacrificing of an Albino gull, once in a king's reign, to the God of commerce. She is selected and trained for the cruel purpose, and, at the time appointed, arrayed in silks, and decked with flowers, feathers, and jewels, she is taken down the river in a canoe, followed by a great multitude, with music of drums and other instruments, the firing of guns, etc. At a certain place she is thrown into the river, and, being loaded with heavy weights, sinks to the bottom."

"In this sacrifice the victim is a voluntary one, as she has been taught to believe that at the bottom of the river she will be met in a cave by a messenger, who will conduct her to the white man's country, whence another will bring her to the white man's heaven and introduce her to the white man's God; and to him she will be permitted to make her plea, beseeching him to send many ships with great riches to her country. Afterwards, she will enjoy perpetual happiness in the land of the blessed."

The Corresponding Secretary also presented a letter from Prof. Weber of Berlin, respecting a Bopp-foundation (Bopp-Stiftung), which it was proposed to establish in Berlin, in honor of the founder of the science of comparative philology, and for the furtherance of the science, on the 16th of May, 1866, the fiftieth anniversary of the date of Bopp's Preface to his "Conjugation-System of the Sanskrit Language, as compared with the Greek, Latin, Persian, and German"—a work which might be said to fix the birth-time of the science. The details of the appropriation of the fund raised to its object, the promotion of comparative philology, are to be determined by Prof. Bopp himself, in conjunction with a committee composed of such men as Böckh, Lepsius, Kuhn, Steinthal, Weber. The Corresponding Secretary said that he was authorized to receive and forward the contributions which it was presumed that American scholars would desire to make to the foundation.

Nearly one hundred dollars were subscribed on the spot by some of the members present.

There being no farther business before the meeting, communications were called for. Of those offered, the first two were read in the afternoon of Wednesday, the others in the forenoon of Thursday.

1. On the Chronology of Bunsen; by Rev. Ebenezer Burgess, of South Franklin, Mass.

Mr. Burgess described some of the main features of Bunsen's system of chronology, by which he refers the beginnings of Egyptian language to about 14,000 B C., and expressed his utter rejection of the system itself, and his disapproval of the argumentation by which it was supported. He particularly condemned the arbitrary manner in which Bunsen dealt with the facts and figures of Scripture history, and claimed that, whatever inaccuracies there might be in the Scripture chronology in its form as handed down to us, Egyptology had as yet furnished no valuable or authoritative rectifications.

2. Reply to the Strictures of Prof. Weber upon his Essay respecting the Asterismal System of the Hindus, Arabs, and Chinese; by Prof. William D. Whitney, of New Haven.

Prof. Whitney apologized for again bringing the well-worn subject of the *nakshatras* before the attention of the Society, but pleaded that he could not pass unnoticed Prof. Weber's reply (in the *Indische Studien*, vol. ix., pp. 424-59) to his former article (in *Journ. Am. Or. Soc'y*, vol. viii., pp. 1-92), if it were only because he was compelled to admit the justice, in one or two points, of Prof. Weber's strictures. Thus he had, in the first place, wrongly ascribed to the latter the confident opinion that the Chinese system is derived from the Hindu; whereas he should have said that Weber defended a thesis which, if established, would carry this as an inevitable conclusion (even though Weber himself hesitated to draw the conclusion). He defended his view that the Arab system was not shown to be derived from the Hindu, claiming that the late authorities upon whom Weber and Steinschneider rely are of no avail to prove the origin of an institution anterior to the rise of Islam, and that the relations of the two systems show the borrowing from India, which these authorities acknowledge, to have been, not of the series of astensms themselves, but probably of their astronomical and astrological use. He explained what he meant by charging Weber with treating the *nakshatras* as if they were single limiting stars, and endeavored to show that this was a natural and even unavoidable inference from Weber's reasonings and language respecting them. He defended himself against Weber's charge of disingenuousness, in having changed without sufficient acknowledgment his former opinion as to the original relation of the *nakshatras* to the moon, urging that the change was distinctly made and recorded in the "additional notes" to the translation of the *Sûrya-Siddhânta*. The subject of the relations of the two systems, of twenty-seven and of twenty eight *nakshatras*, was briefly discussed anew, the writer insisting upon his previous opinion, and defending the arguments by which it was supported. He was also inclined to allow in the general argument more weight than heretofore to the consideration that the Hindu system was always practically one of twenty-seven members, and would probably have been communicated as such to any foreign people. He strongly disapproved the admission of repeated borrowings and modifications under foreign influence, which Weber was so ready to make. After discussing some other points of less prominent consequence, he remarked, as very important, Weber's apparent willingness, expressed near the end of his paper (pp. 454-5), to put the whole investigation upon ground where he could heartily join, and which would, he thought, lead to a reconciliation of their opposing views in all essential respects: in accepting, namely, the comparison of the three systems as the authoritative measure of their joint and several deviations from their original, and as the means of determining what that original must probably have been.

The writer expressed, finally, his no small astonishment that Prof. Weber, without any sufficient examination, or consultation of persons better versed in such matters, should have rejected his reasonings, directly founded on mathematical consid-

erations, respecting the possibility of finding a time for the origin of the names of the Hindu months, and respecting the relation of Caitra and Vâicâkha as spring months; pointing out that, as regards the latter point, Prof. Weber had unwittingly put himself in the position of one attempting to prove, on philological grounds, that the precessional movement of the equinoxes is from west to east, instead of from east to west.

3. On the Assyro-Pseudo-Sesostris; by Mr. Hyde Clark, of Smyrna, President of the Academy of Anatolia, etc., etc.: read by the Corresponding Secretary.

Mr. Clark proposes to call by the name "Assyro-Pseudo-Sesostris" a rock cut monument, of which he sends a photographic picture, near Nymphæum or Ninfî, and which is described by Herodotus (Book ii, ch. 106) as on the road between Sardis and Smyrna. He regards it as doubtful whether Herodotus ever saw the monument, and supposes him to state on the authority of the Egyptians that it commemorates the victories in Asia of Sesostris. Lepsius maintains its true Egyptian character, which is disputed by Kiepert and Ritter. Mr. Clark regards it (and the picture sent fully sustains his opinion) as being certainly not Egyptian, but of a character allied to Assyrian. It is not in a situation adapted to accomplish the design attributed to it by Herodotus, being off the high road, in an obscure side-valley. It was more probably only a local record, or an object of local worship. The people and epoch to which it really belongs cannot at present be determined. The other Pseudo-Sesostris mentioned by Herodotus, as on the road from Ephesus to Phocæa, Mr. Clark conjectures to have been cut on the precipitous cliffs and rocks under Kechi-Kalessi, above the plains of the Cayster.

4. Pres. Woolsey, of New Haven, gave a brief account of the Oriental versions of the Scriptures now in the process of publication, or under consideration, by the American Bible Society. He referred particularly to the stereotyping of the new Arabic version of Drs. Smith and Van Dyck, which the latter is superintending at New York. He alluded to the question of the Chinese versions, with the disputed modes of representing the name "God," as lately opened again, and as seeming to require a renewed discussion and settlement; but it would probably be some time before a conclusion was reached. He spoke, finally, of the proposals made by missionaries in Central Asiatic countries for a version in the Eastern Turkish, and of their claim that it would be available for the use of a very large and wide-spread population, owing to the close relationship of the Turkish dialects.

5. On the principles of English Accentuation; by Prof. Rudolph L. Tafel, of St. Louis: read by Prof. Hadley.

Prof. Tafel remarked. First, that English accent, which is peculiarly forcible, is generally so disposed that, when inflections are to be added, it can be done without disturbing the accent. On this principle he accounted for the difference of accent in *com'pact* and *compact'*, *com'pound* and *compound'*, and the like. Second, that, in words of foreign origin, the accent is generally determined by English analogy, not by foreign pronunciation. Third, that English accent, as being Teutonic, falls on the radical syllable of Teutonic words, while in words of Latin origin, the roots of which are much less distinctly perceived by the people at large, though the accent often stands upon the root, yet often it falls upon a prefix; the choice being dependent in a great degree on the phonological weight of the syllables, i. e. on the vowel quantity, and the number of consonants following the vowel. Walker's statements on the subject (§ 490) were criticised, and his errors pointed out. In conclusion, Prof. Tafel applied his principles to the class of English verbs of which *contem-plate*, *demonstrate*, *illustrate*, etc., are specimens. He holds it necessary, in order that a may have its proper long sound in such forms as *contemplating*, *contemplat-ingly*, that a secondary accent should be laid upon it, and consequently that the

primary accent should fall on the first syllable; thus *con'template*, *con'templa'ting*, *con'templa'tingly*. He recognizes this as the popular accentuation of the words in question, and regards it as dictated by a true feeling for English analogy; he would not only accept it where Dr. Webster has done so, but would extend it to all words of the same class.

Prof. Hadley observed that in words such as *innate*, *magnate*, *to prostrate*, *to vacate*, etc., the *a*, though immediately following an accented syllable, has its long sound; that in *prostrating*, *vacated* (as in *grandfather*, *grandfatherly*, etc.), a secondary accent is placed upon the syllable next after that which has the primary accent; and that the participles of *contemplate*, *demonstrate*, etc., must be similarly pronounced, if they are accented on the second syllable, as *remonstrating*, *impregnate*, *inculcate*, and some others, are believed to be accented by universal usage.

Prof. Whitney remarked that those who regard a penultimate accent in *contemplate*, *demonstrate*, etc., as being required by Latin rules of quantity, overlook the fact that these verbs come, not directly from the Latin presents, *contemplor*, *demonstro*, etc., but from the participles, *contemplatus*, *demonstratus*, etc. He also pointed out the importance, in such questions, of a historical method, going back as far as possible to the beginnings of English usage, and tracing its changes through successive periods.

6. On Pictet's work: Indo-European Origins, or the Primitive Aryans;* by Prof. Whitney.

The paper was, in greater part, rather a review of the nature and conditions of the problem treated of in M. Pictet's work than a detailed criticism of his solution of it. The writer pointed out, in the first place, the possibility of obtaining from the mere vocabulary of a people some view of their condition and culture. He referred to the important fact, demonstrated by comparative philology, that most of the languages of Europe and of southwestern Asia are descended from one primitive tongue, spoken at some time and at some place by a single limited community; which community, also, was probably, in the main, the actual progenitor of the nations now speaking those languages. To learn something respecting the condition of this community was, accordingly, of the highest historical interest. The only way of arriving at such knowledge is by reconstructing its vocabulary; none of the branches of the family have left traditions which are of any value to illustrate its origin. The vocabulary is capable of reconstruction, partial and incomplete, from the existing or recorded vocabularies of the branches, words found in all or most of these, if not liable to suspicion of independent later origin, or of communication, must have constituted a part of their original inheritance. The genealogical tree of Indo-European descent is not yet made out in sufficient detail to allow us to draw the same inference respecting words found in only two or three of the branches; it may be hoped that the investigation will gain hereafter a greatly increased precision and completeness. To restore the Indo-European vocabulary, and to derive from it a picture of primitive Indo-European conditions, is what M. Pictet essays in this work. Isolated and partial attempts in the same direction have been made before, and their principal results are already among the common places of linguistic ethnology. So important and difficult an inquiry demands the highest qualifications of the etymologist and linguist. M. Pictet is favorably known to scholars by his essay proving the Indo-European character of the Celtic tongues. But that essay, generally sound and conclusive, is disfigured by many weaknesses and errors of detail; and the same thing must be said of the present work. Its author has not that full acquaintance with all the languages compared which is needed to make a perfectly sound etymologist among them, and his etymological method is somewhat loose and credulous. This appears in no small degree in his treatment of the Sanskrit: in his implicit acceptance of the lists of roots set up by the native grammarians, and of the meanings they assign to them; in his confusion of new material with old, his uncritical use of Wilson's dictionary, his treating peculiar Sanskrit

* Les Origines Indo-Européennes, ou les Aryas Primitifs; Essai de Paléontologie Linguistique, par Adolphe Pictet. Première Partie, 1859. Seconde Partie, 1863. Paris. roy. 8vo.

usages as if they were Indo-European, and so on. This fault is the more serious, inasmuch as he is inclined to exaggerate the importance and authority of the Sanskrit (great & these allowedly are) in Indo European etymology, not infrequently talking and reasoning as if it were actually the mother-tongue of the family. The same disposition to over-estimate the importance of what is Indian is seen in his treatment of the Hindu astronomy. Heedless of all that has been learned upon this subject during the present century, he goes back to Bailly, reviving the latter's vagaries, and decreeing his conclusion—that the Hindu epoch of B. C. 3102 is a true one, founded on exact observation at the period—not proved false! Prof. Whitney entered into a brief discussion of Bailly's arguments as reported by M. Pictet, endeavoring to show their groundlessness. The date provisionally arrived at by M. Pictet as that of Indo European unity—namely, about B. C. 3000—is a very sober and modest one: but, on the other hand, his determination of the original seat of the tribe, as in Bactria, is a remarkable example of unsound inference from uncertain or worthless data.

No farther communications being offered, a vote of thanks to the Society of the Brothers in Unity, for the use of their hall, was passed, and the Society adjourned, to meet again in Boston, May 16th, 1866.

ERRATA.

p. 12, note, l. 5—for 1849 read 1840.

p. 58, note, l. 3—for *jyeshthaghni* read *jyeshthaghni*.

p. 184, l. 3—for *Anabiticum* read *Anabaticum*.

“ “ for *Hæres.*, 18. 38 read *Ep. Hær.*, xxxviii. 2.

“ 1. 16—for *N. 2, Ant.* read *N. 2. 1. Art.*

In the paging of the Appendix, the numbers xiii. and xiv. are accidentally omitted.

